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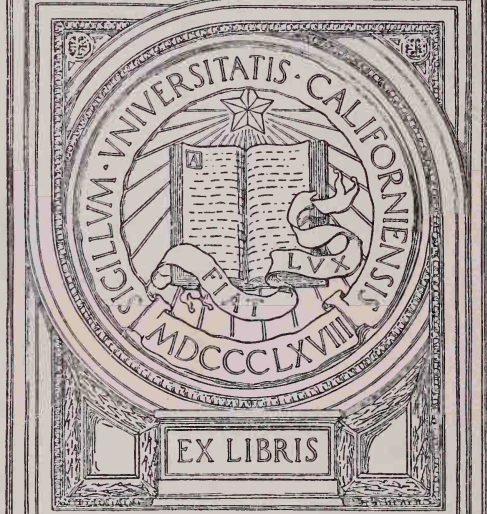

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GOLDEN RULES OF GYNECOLOGY

GOLDEN RULE SERIES

GOLDEN RULES

OF

GYNECOLOGY

APHORISMS, OBSERVATIONS, AND PRECEPTS ON THE PROPER DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN

BY

GEORGE B. NORBERG, M. D.
KANSAS CITY, MO.

PROFESSOR OF DISEASES OF WOMEN AND CLINICAL GYNECOLOGY, UNIVERSITY MEDICAL COLLEGE; GYNECOLOGIST KANSAS CITY GENERAL HOSPITAL; FELLOW AND EX-PRESIDENT KANSAS CITY ACADEMY OF MEDICINE

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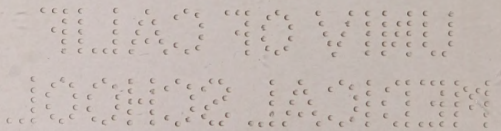

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PREFACE.

The purpose of this volume is to give its readers those methods of gynecologic diagnosis and treatment, the observance of which is known to produce the best results.

The demands made upon the time of the busy general practitioner are so many and so varied that it is necessary for him to eliminate from his reading lengthy dissertations that repeat what has been said over and over again, and that often leave obscure the ideas that they intend to convey.

A great many subjects are given considerable space in textbooks on gynecology, which really belong under general surgery. No attempt has been made to cover these subjects.

It has been a constant effort to make short, emphatic, and convincing statements that may prove to be of practical value.

The literature on gynecology has been thoroughly searched, and what has seemed to be the best methods of procedure have been incorporated in this little book.

In my work on this volume this fact has been indelibly impressed upon me: "How much is written, how little really said." The greatest task is how

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to condense so that every statement means something—"To put the nail in the right place and to drive it home." How well I have succeeded must be left to my readers. I trust, however, that they will be as much benefited in reading it as I have been in the preparation of the same.

I am indebted to Dr. Henry A. Cables for his assistance in going through the gynecologic literature. I am deeply indebted to the publishers for their assistance and patient indulgence.

GEO. B. NORBERG.

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Kansas City, Mo.

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INTRODUCTION.

Remember that one of the most important principles in gynecologic practice is *every-day* asepsis.

Cleanliness of mind is as necessary as cleanliness of body.

Remember that, unless your patient has a good reason for an examination being postponed, it is far better to lose the prospective patient than to prescribe symptomatically. She will return for her examination after a few weeks of internal medication by some other physician.

Remember that there are exceptions to this rule; unless the gravity of the case demands it, it is not wise to examine young girls or single women—if it should become necessary, and she is a modest, bashful person, her nervous system can be maintained in a better condition by administering an anesthetic for such an examination. Moreover the examination can be made then with perfect satisfaction, on account of the complete relaxation and freedom from pain.

Remember that pelvic examinations should never be undertaken with a woman lying recumbent in bed. Knowledge thus gained is usually very unreliable. One frequently is obliged to use a bed instead of an examining-table; but the patient should

be placed across the bed with the hips on or near the edge and the knees slightly flexed. The annoyance from the sinking-down of the hips can be obviated by slipping two boards from a dining-room table under the mattress.

Tables are far superior to chairs for office work.

Much annoyance can be spared a physician if he would have a relative or friend accompany the patient to his office for examination or treatment.

Examine as many women as your opportunity affords, thereby becoming familiar with the normal and the abnormal. It requires much practice to educate the fingers to a keen sense of touch. The examining finger alone gives one only an idea of the condition of the vagina, whether the bladder is sagging (cystocele), or the rectum bulging (rectocele), and a general idea of the condition of the cervix. It requires the combined examination—vaginoabdominal, the rectoabdominal—to ascertain with any degree of accuracy the true condition in the pelvis.

The speculum is a very useful adjunct where it is desired to bring into view the cervix or the surrounding vaginal wall, but one should never make a diagnosis by the use of the speculum alone—the speculum examination should usually follow the bimanual examination.

One must learn to judge his patient; don't be vacillating in your advice or opinion; be sure you are right, and stick to it. In such a case information and advice carry confidence and conviction di-

rectly to the patient; while with the contrary she is soon filled with distrust.

Your conscience should not permit of wrong-doing for pay; there is enough legitimate work for all.

GOLDEN RULES OF GYNECOLOGY

CHAPTER I.

GENERAL CONSIDERATIONS.

DIAGNOSIS.

General.—Learn to be observing; this comes with experience, of course, but is much more easily acquired by some than others.

Often many things are suggested to the experienced and observing physician by the first glance at his patient. A woman, near the age of fifty, who is anemic, with skin dry and waxy, suggests carcinoma of the uterus or of the mammary gland; one who is thin, with a pinched expression, large abdomen, and who walks carefully and with some difficulty, may suggest ovarian cystoma. A woman in the middle period of life, plump, with a large abdomen, but with rosy cheeks, who walks with a strong, steady step, suggests normal pregnancy.

Remember that diseases of the middle period of life are more frequently inflammatory, and due to accidents of child-birth, abortions, and infections,

while in the earlier life of the female the disorders of the menstrual functions are the ones with which we have to deal. These are mere suggestions at the beginning of the examination of our patient, but they will be found to be of great help if properly regarded.

Always keep a full history of every patient, with diagnosis, and treatment, whether medical or surgical. It is very embarrassing to have a patient return in two or three years and refer to her former sickness and treatment, which, of course, is entirely forgotten. If an accurate history and record are kept, one can refer to them, and the case at hand will be fresh in one's memory.

Don't bother the patient and waste your own time with a number of unnecessary questions; remember that the history of remote ancestors is seldom of vital importance in gynecologic practice. As a general rule, it is best to note down the name, address, age, height, weight, whether married or single, etc., and then allow the patient to tell the nature of her symptoms and sickness. This soon brings the physician to a definite plan of procedure, when he can proceed with a systematic inquiry and note down at the same time points of interest.

(1) *Menstruation.*—At what age did it begin; regular or irregular; how many days does it last; normal, scanty, or profuse in amount; is it painful; if so, what relation does it have to flow? If the patient has reached the menopause, inquire at what age;

whether it has ever returned; and any questions pertinent to the case.

(2) The number of children; whether miscarriages or abortions; were any of them of unusual severity; were instruments used; was the convalescence delayed beyond the usual time with any of them; and if so, why?

(3) Inquire if she has leucorrhea; whether profuse; color; odor. Is it present during entire intermenstrual period; does it cause itching or burning?

(4) Is there irritation of the bladder causing frequent micturition; or is there difficulty in urinating?

(5) Inquire regarding the bowels; whether constipated or not.

(6) Is there pain in the pelvis; if so, is it constant; does it radiate from hips down thighs and to calves of legs?

(7) Is there backache; if so, where located?

(8) Is there headache; if so, where?

Physical.—Remember that it is not safe to omit a thorough examination of the chest and abdomen before attempting to make a diagnosis of a pelvic lesion. This is particularly true if an operation is necessary for relief; although there are now but few patients that cannot take an anesthetic, patients feel better satisfied if the physician examines them and assures them that they can take it safely.

Remember that the abdomen should be carefully examined, and finally the pelvic organs. Uterine fibroids, large cysts of the ovaries, and the gravid

uterus can be palpated above the pelvis, but this should usually be accompanied by the vaginoabdominal palpation. This means the index finger of one hand in the vagina, and the other hand pressing down above the pubis and over the abdomen.

The rectoabdominal examination is often useful (index finger of one hand in rectum, the other hand above pubis) in examining for tumors and exudates low in pelvis.

Do not attempt an examination if the rectum is filled with fecal matter or the bladder full of urine; it may change the position of the pelvic organs very materially and interfere with a correct diagnosis.

Don't be in too great haste to give an opinion in a chronic case, where the patient has a fat abdomen and where the examination is difficult—it is better to have her come back a second or third time.

Don't attempt to examine young girls or unmarried women, especially when it is against their wishes, without an anesthetic.

Instrumental.—Now remember that preceding the use of a vaginal speculum or perineal retractor the external genitals are to be inspected. These are usually taken in at a glance without much unnecessary handling of the parts. Note if there is any discharge; its color and consistency; whether it causes excoriation of the parts; whether there are chancre, chancroid, venereal warts, or other diseases of the external genitals; as adhesions and irritations of the external meatus, hymen, or carun-

cula myrtiformis; laceration of perineum, with cystocele and rectocele; hemorrhoids, or anal fissure or fistula.

Remember that the ordinary bivalve speculum, with the patient in the dorsal position, is sufficient for examination of the cervix uteri. Inspect the cervix; notice if it is swollen or lacerated; whether the lateral walls are white and hard with scar tissue; whether it is studded with small white cysts, due to the plugging up of the Nabothian glands. Notice the amount and character of discharge, ulcerations, or evidence of malignant disease, etc.

Remember that the normal color of the cervix is pink (it has a bluish hue in pregnancy), it is smooth and conical in shape; inflammation causes it to become large, red, and rough. It should also be noted whether the external os is of the pinhead variety or whether it is sufficiently large.

Remember that the perineal retractor, with the patient in either the lateral or semiprone position, is useful where it is desired to pull the cervix down within easy grasp or exposure; this position is especially useful in removing stitches from the cervix or in removing a polypus from the canal of the cervix uteri.

Don't make a practice of using a sound in the uterus at every opportunity; this practice should be condemned except in very exceptional cases, for the sake of clearing up a diagnosis or where some intrauterine treatment is especially indicated, and then

with the strictest aseptic precautions; much harm has been done by the promiscuous use of intrauterine instrumentation.

Microscopical and Chemical.—Don't fail to make a thorough examination of the urinary organs and their excretions. The modern physician is so skilled that he can easily make a thorough chemical and microscopic examination of the urine. Cystoscopy and ureteral catherization are so common and are accomplished with so little difficulty nowadays, that diseases of the kidneys, ureters, and bladder can be quite accurately diagnosed.

Don't fail to make a microscopic examination of the vaginal and uterine discharges, where it is indicated.

Don't make a positive diagnosis of cancer of the uterus (except in advanced cases) without a microscopic examination.

Don't fail to resort to the microscope in case of any ulceration or any suspicious appearance of the cervix. It is sometimes necessary to use the curette to get a specimen from the fundus or high in the cervix for microscopic examination.

Don't pass over a suspicious-looking cervix, and say that it is not cancer because the patient is too young—one is scarcely exempt from it at any age; it is not rare in the twenties.

It is sometimes necessary to make an exploratory incision to clear up a doubtful diagnosis; when this becomes necessary, the surgeon should be ready to

meet any condition that presents itself and to do a finished operation.

Don't fail to make a blood examination whenever it is indicated for an index, or to help to clear up a doubtful diagnosis.

LOCAL TREATMENT.

While there is much to be accomplished by local treatment in gynecologic cases, yet in no class of diseases, perhaps, has local treatment been miscarried farther than for ailments peculiar to women. It is doubtful if there is any inflammatory disease (at least chronic) of the pelvic organs of a woman that cannot be relieved temporarily by the use of tampons of glycerin and ichthyol, or boroglycerid and glycerin, with daily hot douches. Remember that this practice is perfectly proper and should be highly endorsed when it is done for temporary relief, and when it is so understood by the patient; but when undertaken as a curative measure in all the distorted conditions of the pelvic organs, with adhesions and even pus collections, too much cannot be said against it; and if one will only familiarize himself with the anatomy of these parts, as well as acquire an accurate knowledge of the pathology of pelvic disease, he will need no further proof to convince him of the exact limitations of local treatment.

The efficiency of rest in bed, the hot douche, and hot fomentations in acute inflammatory disease of

the pelvic organs cannot be gainsaid by anyone who has tried them intelligently; but they are seldom so used, except in the hands of a trained nurse.

Effect of the Hot Douche and Applications.—In a great measure this acts in the same manner as Bier's hyperemic treatment—by its local effect it stimulates the walls of the relaxed blood-vessels, causing a contraction. If this is continued for a long time and frequently, the circulation will improve; and instead of the relaxed vessels, with stasis and edema of the surrounding tissues from exudation, the vessels contract, circulation is improved, the exudate is absorbed, and the swelling and pain are relieved.

Remember that if this line of treatment is instituted early it may prevent adhesions, abscess formation, and general deformity of the pelvic organs.

Now remember that douches for this purpose should be taken lying down (either using a douche pan or getting into the bathtub). It is not necessary to have a swift stream of water; hence the irrigator or douche bag need not hang high. Enough water (at about 110° F.) should be used to make the douche last for ten or fifteen minutes.

Remember that the virtue of this treatment lies in keeping the heat and moisture in contact with the inflamed tissues a long time. This should be repeated at intervals of every two hours, day and night. If there is any odor to the discharges, a teaspoonful of formaldehyd, 40 per cent, can be added. Any other medicinal agent may be used

that might be suggested for the particular case.

Remember that the hot fomentations should be changed as frequently as they cool—every five to ten minutes. In hospital practice (and it can be done in private practice), a bag is made with a stick sewed in at each end; the flannel cloth that is used for the application is placed in this bag, and the whole placed in the vessel of boiling water. This is wrung out by use of the sticks, the whole carried to the bedside of the patient, when the flannel is removed from the bag (steaming hot), and placed on the patient's abdomen as warm as it can be tolerated, and the cooled application is placed into the bag and pan of hot water. This is repeated back and forth, and it requires about all of one nurse's time to give the douches, and use the hot applications properly. It is wonderful, however, how quickly and completely this plan of treatment gives relief; the patient who has been in the throes of pain in twelve to twenty-four hours begins to heave sighs of relief, the pulse becomes softer and slower, and the temperature drops.

Remember that the bowels should be thoroughly evacuated daily by the use of salines, cathartic waters, or enemata.

Remember that in subacute or chronic diseases of the pelvic organs tamponade with the various mixtures of glycerin serves splendidly for temporary relief. Clinical patients are living examples and prove beyond dispute just how far this line of treat-

ment is meritorious. They are a class of people whose time is required every day for the support of themselves and their families; they cannot lie around as invalids, nor have they time to go to a hospital for a surgical operation. They come to our clinics with the gravest pelvic disease, scarcely able to walk, and if they were women of a higher plane in life, they would be confined in bed. Something must be done for them; so they are given a tampon of glycerin and ichthyol, 10 per cent, and instructed in the art of taking douches. After three or four visits they return smiling and say that they feel much better. After ten or twelve treatments they disappear, only to return with a relapse in a few weeks or months. Large numbers continue in this way for years, and indefinitely.

Remember that, while the value of the tampon to some extent is derived from the medicinal substances that it carries to the cervix, and as a support to the uterus in some cases, yet the greatest benefit comes from the glycerin mixtures, on account of their hygroscopic properties. Do not use cotton tampons; they become too hard and cause pain. Lamb's wool, with a piece of string tied to it, is a splendid tampon. A very convenient tampon is made by cutting plain gauze four or five inches wide by two feet in length. Saturate about one half of it, and pack around the cervix as desired through an ordinary bivalve speculum, leaving about one inch outside of vagina so that patient can readily pull it

out when it has served its usefulness. In withdrawing the speculum, gentle pressure must be made against the tampon with the dressing forceps, so that it may not become dislodged. A tampon should be left in from twelve to twenty-four hours.

Hemorrhage.—Remember that tampons are often useful in checking uterine hemorrhage. By the use of a bivalve speculum or a perineal retractor small pieces of cotton, wrung from warm water, are packed well up around the cervix, finally filling the vagina. The cotton might be wrung from a boric acid or a weak formalin solution for the antiseptic effect, or a weak solution of adrenalin may be used for its astringent properties. If the hemorrhage is very great, this entire pack may be forced out by the blood-clots and fluid blood coming from the uterus.

Remember that, if the cervix is or can be sufficiently dilated, strips of gauze, wrung from some mild astringent solution, and packed directly into the cavity of the uterus, are effective when vaginal packing fails.

Remember that in ulceration or erosion of the cervix local treatment must be instituted, but we must not mistake the hypertrophied everted cervical mucous membrane of a lacerated cervix for ulceration and erosion.

Remember that retention cysts of the Nabothian glands are relieved by puncture, followed by tamponade, hot douches, etc.

Infection, particularly gonorrheal, is met by local treatment. In such a case, remember that rest in bed and vigorous treatment to prevent its spread beyond the vagina are demanded to save her from being completely ruined.

Local treatment is necessary, effective, and often entirely sufficient in many of the diseases of the vulva or external genitals.

Intrauterine.—Don't get into the habit of using intrauterine treatments indiscriminately. Women as a whole would have been much better off had this plan of treatment never been instituted. When it does become necessary, use it under the strictest aseptic precautions. It may be of benefit in cases of acute endometritis without infection, when a few applications of tincture of iodin may be applied to the endometrium.

Remember that the cervix should be well dilated and the applications made two or three days apart; if three or four treatments do not give the effect desired, it is better to desist, and let the patient rest from treatment for a time.

It is a question whether or not the benefit derived in these cases comes from the astringent application or from the dilatation of the cervix alone, thus establishing better drainage from the uterine cavity.

Remember that it is necessary to curette and wash out débris from the uterus, following miscarriage or abortion; but remember that this can be done more thoroughly and safer under a general anesthetic.

Operations of this magnitude should be done in a hospital; don't undertake them in the office.

It is permissible to use a uterine sound in cases of uterine fibroids (posterior) or prolapse, in order to clear up an uncertain diagnosis, but these cases are rare. Now reason, and see if it does not appear quite doubtful whether argyrol, protargol, or any of these antiseptics has any beneficial effect whatsoever in destroying pathogenic micro-organisms within the cavity of the uterus; the issue almost entirely depends on the antitoxic ability of the blood, with its leucocytes. Now, if it were possible to say that the infection was limited to the surface of the endometrium, it might do some good, but even then, we might bruise the otherwise intact endometrium, which was furnishing splendid resistance, and open up new portals for the entrance of infection to the deeper structures.

CONSTIPATION.

Remember that most women are constipated and that assistance in a general way (diet, exercise, etc.) may save her from the necessity of taking daily cathartics.

Remember that the ill effects of constipation are not only in the failure to remove the residue from the intestinal tract and its discomforts; its evil effects reach the whole economy. While the sedentary habits of a woman are no doubt justly blamed for a part of her constipation, and no doubt also,

may be blamed for the chronic disorders of the stomach, intestines, liver, and kidneys, yet, on the other hand, there are other anatomical and physiological reasons.

Remember that the pelvic organs become congested and engorged at every menstrual period. Lacerations of the perineum allow displacement, and interference with the function of the rectum. Uterine prolapse and displacements, tumors of the uterus and ovaries in a mechanical way produce constipation, and moreover, it is not always so convenient for a woman to regard and attend the calls of Nature as it is for a man. However she should be taught from childhood that it is extremely necessary to obey Nature promptly in her demands, and to render assistance by forming regular habits—to go to stool regularly, just as she has regular hours for meals.

A woman who does her own housework or looks after her own children should not be accused of sedentary habits. However, when she is guilty of leading a sedentary life, it must be overcome, and no doubt, in such a woman it can best be accomplished by ordering gymnastics, massage, or some form of exercise that is combined with pleasure.

Now remember that women do not drink enough water. Water not only furnishes the proper fluid to the body, but taken in proper quantities and at proper times, cleanses the stomach of mucus, promotes peristalsis, increases perspiration and the

quantity of both solid and watery constituents of the urine, aiding the excretion of carbonic acid and absorption of oxygen; thus, all the tissues in the body are relieved of salts and waste material, and the tendency to calcareous degeneration of blood-vessels is lessened.

To say that distilled or boiled water is dead and has no virtue is a mistake. Boiled water contains but few salts and distilled water no salts, and therefore they have greater absorbing power when filtering through the system. While it is also free from pathogenic micro-organisms, the food that we eat furnishes enough of the earthy salts to our system, so that they do not have to be taken in the water we drink.

To get a woman to drink enough water daily, the amount and time must be specified until she has acquired the habit, so to speak. A woman who is in normal health should drink from one and a half to two quarts of water daily. A good practice, I believe, is to have her take a bottle or pitcher of water to her bedroom at night; advise her to drink one or two glasses full while she is dressing in the morning; this washes the mucus from her stomach, improves the appetite for breakfast, and aids the peristaltic action of the bowels.

Large quantities of water should not be taken during meals, as it dilutes the digestive fluids and predisposes to indigestion. The drinking of several glasses of iced tea with meals should be condemned.

A glass or two of water should be drunk between meals, and the same amount taken between the evening meal and bedtime. The temperature of the water need only be that of ordinarily cool drinking water.

If the case is obstinate, a one-fourth to one-third teaspoonful of common table salt added to the water taken before breakfast acts almost as well as a saline cathartic. Fruit of some kind should be eaten before breakfast.

In very obstinate cases a tablespoonful of olive oil taken with each meal helps very materially. Of course, in the cases that do not yield to this line of treatment, it may become necessary to divulse the spincter ani under an anesthetic, and to resort to the various aperient waters or mild cathartics at times, until we have been able to correct the trouble entirely.

CHAPTER II

DISEASES OF THE VULVA.

VULVITIS.

Remember that there are three varieties: viz., the simple, the follicular, and the gonorrheal.

Remember that simple vulvitis found in adults is due to a lack of cleanliness, and the colon bacillus and the skin cocci are found.

Be careful to eliminate a redness and swelling due to trauma caused by riding, cycling, etc.

Remember that in addition to the redness and swelling there will be found an increase in the mucous discharges, and mucopus, red dots marking the site of the orifices of the tubular glands; also, there will be itching of the parts and scalding during urination.

Remember that in women who have diabetes and an ammoniacal urine the sebaceous glands become inflamed and discharge pus, or the mouth of the glands becomes plugged, when there will be produced an acne-like pustule.

Remember that a vulvitis with intense pruritus with dry, parchment-like skin and mucous membrane calls for an examination of the urine for sugar.

Remember that the gonorrheal vulvitis is much more common in the cities and large towns.

But remember that the history that can be elicited from the patient makes the task of differentiation more simple. Even if the patient is unwilling to give the desired information the objective symptoms will be of sufficient "tell-tale" character to get her to admit the possibility of an infection.

Remember that on inspection the urethral orifice is puffy and red, and by pressure pus may be forced out; the prepuce and clitoris are edematous, and the engorgement of the erectile tissue causes a semi-erection of the clitoris; the ducts of Bartholin's glands are swollen and discharge pus, and the entire gland is tender.

Remember that the microscope always shows the gonococci in the pus and the secretions should be examined for the cocci in all cases of vulvitis.

Remember that cancer or vesicovaginal fistula by irritating discharges may cause a severe vulvitis and they should always be excluded by examination.

Remember that all varieties are contagious, and when occurring in institutions, strict isolation should be enforced.

Treatment.—Remember two things are imperative: viz., rest in bed and cleanliness. The parts should be thoroughly cleansed with warm water to which is added a little tincture of green soap, or a saturated solution of boracic acid may be used.

After a thorough cleansing twice daily (in the simple form), a boric dusting powder should be used. In the severe form a hot sitz-bath twice daily will give relief and be cleansing.

Remember that the bowels should be kept freely open by the use of salines daily, but later the simple laxatives may be used. The diet should be light during the acute stage.

Keep the urine bland and non-irritating by the free use of pure water. Should it be strongly acid, potassium acetate and the tincture of belladonna may be given; or, should the urine be alkaline, benzoate of sodium or ammonium should be given.

Local medication consists in douching the vulva with bichlorid of mercury solution (1: 2000 or 5000) with the labia separated by a piece of lint or cotton pledget soaked in the bichlorid solution.

In the chronic form or in severe acute conditions lint compresses, soaked in Goulard's solution and warm water equal parts, may be applied to the vulva; or acetate of zinc gr. j to ounce of water, or sulphate of zinc, gr. ij to the ounce of water, may be used when an astringent action is needed.

When there are excoriations and erosions an ointment of benzoated oxid of zinc should be used. In the follicular form the vagina should be douched two or three times daily with normal salt solution, and a vaginal tampon used to collect the secretions and thus protect the vulva. The tampon should be medicated with glycerite of boroglycerin.

Paint the affected parts with silver nitrate, gr. xx to the ounce, every three or four days, and apply compresses moistened with an alkaline solution—bicarbonate of soda gr. xxx to the ounce—continuously over the vulva and between the labia.

In the severe cases the follicles should be punctured with a slender bistoury, and the contents squeezed out and painted with a solution of silver nitrate, half dram to the ounce, and apply the following ointment:

℞ Ichthyoli .....3 ij
Phenolis .....gr. xxv
Glycerini .....3 iij
Unguenti petrolati.....q. s. ad 3 ij
Misce et fiat unguentum.
Sig.: Apply locally.

In the gonorrheal form, once or twice daily after thoroughly cleansing the parts, a douche of bichlorid, 1: 2000 to 1: 5000.

The area should be thoroughly bathed with a 5 per cent solution of silver nitrate or 10 per cent protargol at the beginning, then a daily application of a 2 per cent solution.

Remember in gonorrheal vulvitis to give a good antiseptic vaginal douche and close the opening with cotton soaked in an antiseptic solution to prevent the extension of the infection along the genital tract.

In diabetic vulvitis the vagina should be irrigated daily with a solution of corrosive sublimate, 1:

2000, or a 1 per cent solution of lysol. An ointment of the following may be applied:

℞ Acidi salicylici.....gr. x
Unguenti petrolati.....℥ j
Misce et fiat unguentum.
Sig.: Apply locally.

Or:

℞ Phenolis.....gr. xx
Unguenti zinci oxidi.....℥j
Misce et fiat unguentum.
Sig.: Apply locally.

This will relieve the intense pruritis.

Where excoriations or abrasions occur they should be painted every three or four days with a solution of silver nitrate gr. xxv to the ounce.

In many of these cases, no relief will be obtained from the wet dressings; in these cases, after thorough cleansing, some dry, mildly antiseptic powder is of great advantage—viz., boracic acid and calomel, equal parts; calomel alone; borated talcum powder.

BARTHOLINITIS.

Remember that these are racemose glands about the size of a bean, located in the labia majora at the junction of the middle and posterior third, and the ducts open in front of the hymen with an orifice about the size of a head of a pin.

Remember that the following may be the cause of an inflammation of these glands: gonorrhea; dis-

charges; extension of inflammation; suppuration of or a cyst of the gland.

Remember that by far the largest majority of the cases are due to the gonococci and that usually only one gland at a time is involved.

Inflammation and suppuration of the glands of Bartholin are so common in gonorrheal infections that they are frequently referred to as sufficient evidence of the character of the infection, when they are found.

Remember filth may be the cause and the staphylococci may be the pathogenic organisms found in the abscess.

Remember that once the gonococci have infected the gland they may remain dormant, causing a slight watery discharge that will infect the patient or others coming in contact with the secretions.

Remember the subjective symptoms are: a sense of burning; a constant, sharp, lancinating or throbbing pain with pruritis. All symptoms are made worse by standing or walking, but the recumbent posture gives relief.

Remember that on examination there will be swelling and edema, and in severe cases, the swelling extends to the anus. The mouth of the duct of the gland is inflamed, and pus may be squeezed out.

The evidence of pus is first apparent on the inner side of the labium. The tumor is round or oval; firm or fluctuating, and tender on pressure.

Remember that a hernia into the labium is not

tender on pressure, is elongated, and the most important of all, there is succussion on coughing. It attains a large size if not treated and becomes extremely painful; the patient walks with great difficulty, and is unable to find any position that is comfortable; defecation and urination are painful; the abscess may burrow down around the anus and break into the rectum, causing a troublesome fistula.

Remember that in strangulation of a hernia the symptoms of intestinal obstruction will appear.

Remember that many of these cases become chronic with cystic formation in the gland, due to obstruction of the duct, and are then to be differentiated from hydrocele in the canal of Nuck. The hydrocele is a larger tumor, is more translucent, and gives more sensation of fluctuation.

Remember that in case of doubt a differential diagnosis can be fully determined by puncture with a needle.

Treatment.—In very painful acute cases the abscess may have to be opened to afford relief to the patient, after which the cavity should be cleansed and packed with iodoform gauze.

Remember that the vulvovaginal bulb lies just above the upper margin of the gland and should not be wounded.

In acute cases with abscess formation it is far the best to remove the gland completely with a sharp curette. Wash out the cavity with a bichlorid solution, 1:1000, mop the wound dry, and apply pure

carbolic acid to the entire cavity with a swab; pack with gauze, and apply a T-bandage.

If the abscess has spontaneously opened, then enlarge the opening and proceed as above.

Remember that in chronic cases, as well as in the cystic form, the gland should be dissected out, care being taken not to rupture the cyst.

Remember that the nutrient artery enters the gland at the upper end; hence the dissection should be from below upward, and the vessel caught and ligated. Cleanse the cavity, apply carbolic acid, pack, and apply dressing.

The removal of the gland is imperative in chronic cases and those with fistulous openings.

CYSTS OF THE VULVOVAGINAL GLANDS.

Remember that these cysts may be situated superficially or deeply. Those of the duct are always unilocular, while those of the gland may be monolocular or multilocular, depending upon whether one or more lobules of the gland are involved.

Remember that they may be the result of inflammation, usually gonorrheal; or due to an alteration of glandular secretion that cannot escape through the duct, thus causing a retention cyst.

Remember that while small cysts cause no symptoms the large ones interfere with walking and sexual intercourse. Friction to which the parts are subjected may cause irritation and inflammation, and eventually suppuration.

Remember that cysts of the duct are globular or ovoid in shape and located under the mucous membrane at the base of the nymphæ, projecting into the vagina.

Remember that a cyst of the gland is usually about the size of a hen's egg, located in the posterior part of the labium majus, and is freely movable under the overlying tissues. It is smooth, ovoid, seldom transparent, dull on percussion, and found most frequently on the left side of the vulva.

Remember that it is elastic on pressure, irreducible, and painless unless inflamed.

Treatment.—The gland and duct should be dissected out, and the wound sutured, unless suppuration has occurred, when it should be packed.

PRURITUS VULVÆ.

Remember that this is a symptom of some general or local lesion and the cause should be sought.

Remember that it is a very troublesome symptom in diabetes, and all cases call for an examination of the urine for sugar.

Remember that malignant disease of the genital organs may cause a severe pruritus from an irritating discharge and all cases occurring in elderly women call for a careful vaginal examination.

Remember that it may be a reflex symptom depending upon seat-worms, and fissure, or it may be due directly to some anomaly of the pelvic organs, causing an irritating leucorrhea. Irritating dis-

charges are by far the most common cause of this trouble.

Remember that the itching is worse at night, or is made worse by warmth.

Remember that it may be due to a neurosis and may cause melancholy or insanity with suicidal tendencies.

Remember that pruritus may be caused by digestive disturbances or it may result from masturbation or sexual excesses.

Treatment.—Remember that in the treatment the cause must be sought and treated, as well as the local condition.

The very first principle in the treatment is cleanliness, and the next is rest, to prevent, as far as possible, irritating the parts.

Remember that nitrogenous food should be reduced and that milk diet is best. No alcoholic or other stimulants should be allowed, and the bowels must be kept open by a simple laxative. The free use of water usually keeps the urine bland, but if necessary, potassium acetate and belladonna may be given to correct an overacidity.

Remember that mild exercise may be advised, but do not forget that friction of the parts in walking makes the itching worse.

Remember that a good general tonic treatment is usually indicated and quinin, arsenic, iron, and the mineral acids are very beneficial.

Remember that morphin should not be used but

the bromids and cannabis indica allay nervousness and secure sleep.

Sulphonal gr. x to gr. xx; trional gr. xv to gr. xxv; paraldehyd ♏xx to xxx, given at bedtime and repeated in two hours, is often beneficial.

Remember that the most important thing in the local treatment is cleanliness. The vagina and vulva should be irrigated twice daily with normal salt solution or bichlorid solution, 1:3000, or a 2 per cent solution of phenol in glycerin and water, or a solution of lead acetate may be used. All discharges of the vagina should be cleaned out, and a vaginal tampon placed against cervix to protect the vulva from the irritating discharges.

Remember that a compress of lead water and laudanum, or 2 per cent of phenol, often gives excellent results.

Painting the surface with 10 per cent phenol; dilute hydrocyanic acid ʒ ii; acetate of lead gr. l. to ounce of water, on a pledget of cotton held in a dissecting forceps, is often beneficial.

Remember that the parts must be protected from the urine and carbolated vaselin is excellent. The following is an excellent ointment:

℞ Mentholis ..... gr. x
Unguenti creosoti .....
Unguenti camphoræ .....
Unguenti belladonnæ .....
Unguenti petrolati ..... āā ʒ ij
Misce et fiat unguentum.
Sig.: Apply locally.

Or the following:

℞ Phenolis ..... gr. xxx
Mentholis ..... gr. xv
Unguenti petrolati ..... ℥ j
Misce et fiat unguentum.
Sig.: Apply locally.

Other good solutions are strong solution of corrosive sublimate in emulsion of bitter almonds (gr. j to ounce); chloroform (ʒ j) in glycerin (℥ j); dilute hydrocyanic acid (♏ ij to water ℥ j).

For the pruritus of diabetes, diabetic management, local cleanliness, and the use of borated talcum or a boracic acid ointment to protect the vulva are indicated.

When pruritus is due to skin parasites mercurial and sulphur ointments should be used.

In cases due to seat-worms the infusion of quassia should be given in an enema.

KRAUROSIS VULVÆ.

Remember that this is a progressive atrophy and contraction of the vulvar tissues, occurring in mid- or advanced-life, and resembles, somewhat, senile atrophy of the parts.

Remember that the cause is unknown but malignant disease of the vulva often develops from it.

Remember that the beginning of the condition is marked by the appearance of small, brown spots, irregular in shape, slightly depressed below the surface.

Remember that these spots may be very painful to the touch and may cause a pruritus.

Remember that the labia and nymphæ atrophy, forming a slight ridge upon either side. The vulva becomes shrunken, dry, and hard, and the normal appearance is lost.

Treatment.—Remember that the progress of the disease is very slow with no tendency to a spontaneous cure. The treatment is palliative and surgical.

Because of the resemblance to trachoma, Johnstone recommends the yellow oxid of mercury ointment, in strength of from 1 to 3 per cent. First cleanse the vulva and vagina thoroughly with a spray of dioxid of hydrogen and apply the ointment. This is done twice a week. The patient is instructed to apply the ointment twice daily to the external parts. The applications are made at longer intervals as improvement occurs, but the treatment is kept up for months.

Strong solution of phenol is used to relieve the pruritus.

Lint soaked in a saturated solution of lead acetate and laid over the parts often gives relief.

Cracks and fissures should be touched with silver nitrate stick, and zinc oxid ointment applied.

Remember that the removal of the diseased tissue is probably the best method of treatment.

Remember that the incision is made along the juncture of the diseased tissue and the healthy skin

along the lateral and posterior margin of the vulvar orifice. Be sure to get well outside the diseased margin.

Remember the urethral orifice in dissecting the diseased tissues, and do not wound it but carry the incision around it.

The diseased tissue is cut away; the mucosa of the vagina dissected loose, pulled out, and sutured to the healthy skin.

ELEPHANTIASIS VULVÆ.

Remember that, while this is a disease of the tropics, sporadic cases are seen over all the world.

Remember that the enlargement is due to the hypertrophy of the skin.

Remember that syphilis may cause a hypertrophy similar to elephantiasis but it is not so pronounced and mucous patches with other manifestations are present.

Remember that elephantiasis occurs in women between the twenty-fifth and fiftieth years.

It is probably due to the *Filaria sanguinis hominis* and is carried by the mosquito.

Remember that many cases, especially in the tropics, begin as an acute lymphangitis, with constitutional symptoms lasting about two weeks, then subsiding, leaving the vulva slightly enlarged. These attacks are repeated at varying intervals with increasing vulvar enlargement.

Remember that the labia majora are most fre-

quently involved but that any or all of the vulva may be affected.

Remember that the parts are pendulous, the tissues hard, with smooth or warty surface and excoriations, and fissures occur.

Remember that in carcinoma of the vulva the growth is more rapid, induration deeper, and ulceration more extensive.

Treatment.—Remember that medicinal treatment is beneficial only in the early stages, and consists of rest in bed, saline cathartics, and hot or cold moist compresses, or a saturated solution of lead water and laudanum.

Following the subsidence of the acute attack, an ointment of mercury or iodin is applied daily to the vulva, and pressure made upon the parts with a compress and a T-bandage.

Calcium sulphid gr. j to gr. ij twice daily, given when the stomach is empty, is recommended.

Remember that in the sporadic, or in the chronic cases, the complete excision of the diseased tissue gives the best result.

Remember that the hemorrhage should be controlled by ligation of the vessels as the operation proceeds and the aseptic technic should be rigid, as the enlarged lymph-channels make suppuration particularly dangerous.

The edges of the wound are brought together, and as far as possible, the normal contour of the vulva is restored.

VARICOSE VEINS.

Remember that pregnancy is the most frequent cause of this condition and it is more especially in cases of gestation associated with small pelvic tumors.

Remember that uterine displacement, chronic constipation, abdominal tumors, and prolonged standing interfere with the venous circulation of the vulva, hence are often causative.

Remember that symptoms are produced only when the tumor is large enough to interfere with the normal contour of the parts, when patient complains of aching, itching, burning, and a sensation of heaviness in the vulva. Coitus and walking cause suffering.

Remember that it occurs more frequently in the labia majora but other parts of the vulva may be affected.

Remember that the tumor is an elongated, irregular, and knotted mass of a dark-blue color, while the veins under the skin are dilated and tortuous.

Remember that on palpation the mass is boggy and can be made to disappear by pressure.

Remember that the tumor may rupture into the tissues, during parturition, causing a hematoma, or externally causing a serious or perhaps fatal hemorrhage.

Varicose veins in the vulva frequently occur in

pregnancy, owing to the weight and the pressure of the uterus.

Although it is a very troublesome complication in pregnancy, it usually disappears immediately after parturition, and needs no treatment afterward.

Treatment.—Remember that the treatment may be either palliative or radical.

Palliative treatment is used only during gestation and consists of mechanical support by pad or compress over the tumor, held in position by a T-bandage. An abdominal binder should be worn to support the uterus and relieve the pressure on the pelvic veins. Rest in the recumbent position for a few minutes several times daily.

Should hemorrhage occur, firm pressure should be made over the bleeding point until aid arrives, when a deep catgut suture should be inserted to control it.

The radical treatment, where the varix is in the labia majora, is the same as the operation for the cure of varicocele in the male. The labium is made tense by traction, made by the assistant grasping the tissues above and below the most pronounced portion of the tumor. Make the incision over the varix. Expose the veins by dry dissection and pass a ligature around the vessels at the distal and proximal ends of the tumor. Tie and cut the veins at each ligature.

The stumps are brought together and held in

close apposition by securely tying the free ends of the distal and proximal ligatures.

Close the wound with sutures and cover the vulva with gauze held in position by a T-bandage.

HYDROCELE OF THE LABIUM MAJUS.

Remember that this is a collection of serous fluid in the peritoneal sac that forms the canal of Nuck during fetal life. In the fetus the peritoneal covering of the round ligament extends beyond the internal ring, forming a pouch which is called the canal of Nuck. The persistence of this canal after birth forms the sac of the hydrocele.

Remember that it may be single or double and causes no inconvenience unless it becomes large, when mechanically it interferes with walking, sexual intercourse, and labor.

Remember that when seen early the tumor is located in the inguinal canal, but later it descends into the upper part of the labium.

Remember that the swelling is elastic, fluctuating, and translucent, no pain on pressure, and dulness on percussion. The tumor may be increased in size by bearing down or coughing.

Remember that it is important to differentiate hydrocele from hernia; and the following points should be borne in mind in making the distinction:

1. The gradual development of the tumor with no local or general symptoms.

2. Dulness on percussion.

3. Translucency.

4. Absence of inflammatory signs.

5. Elasticity and fluctuation of the tumor, if encysted.

Keep in mind that an inflamed hydrocele and strangulated hernia differ in the absence of symptoms of intestinal obstruction in the hydrocele. The insertion of a needle and the withdrawal of fluid will settle the doubt in diagnosis.

Treatment.—Remember that when the tumors are small they cause no trouble and may be left alone, or the patient given an ointment of oleate of mercury to rub into the skin.

The tumor may be punctured and the fluid drawn off, but it will recollect.

After the withdrawal of the fluid, an irritating solution like the tincture of iodin may be injected into the sac, causing an acute inflammation and obliteration, but the danger is in forcing some of the solution through the abdominal opening into the peritoneal cavity.

The best treatment is the dissection of the sac and the closure of the wound, suturing the individual layers of the wall. The incision is made the entire length of the inguinal canal, and the sac exposed. It is then dissected out, twisted and ligated with a catgut ligature close to the internal abdominal ring, and the sac cut off about half an inch from the ligature.

When suppuration occurs in a hydrocele it should

be opened, curetted, and washed out with some antiseptic solution. The wound should be packed with iodoform gauze and allowed to heal by granulation.

INGUINOLABIAL HERNIA.

Remember that this corresponds to the scrotal variety in the male. It descends through the inguinal canal, following the round ligament.

Remember that the contents of the sac may be intestine, omentum, uterus, or appendages.

A hernia containing the uterus is comparatively rare; it is not nearly so common as scrotal hernia in the male, owing doubtless to the fact that there is an absence of the spermatic cord in the female, and consequently the tissues forming in the inguinal canal are stronger; the pregnant uterus has been found in such a hernia.

Remember that the patient complains of discomfort or griping pain, usually following some exertion. There are gastrointestinal disturbances, such as dyspepsia and constipation.

Remember that the tumor appears first as a small, round swelling at the external ring, but after it has descended into the labium it is elongated and constricted at its upper end.

Remember that the contents of the hernial sac modify greatly the findings on physical examination.

If it contains intestine, the tumor is smooth and elastic, and the size and tensity are increased on coughing, standing, lifting, or straining. It disap-

pears on lying down, and when reduced by taxis a gurgling sound is heard when the gut slips back into the abdominal cavity. The percussion note is tympanitic, and the characteristic impulse is felt when the patient coughs.

When the sac contains omentum the tumor is irregular, feels doughy, and the percussion note is dull.

No gurgling sound is heard when the contents are replaced into the peritoneal cavity, and the impulse on coughing is slight. If the sac contains both intestine and omentum, the signs vary over different areas of the tumor.

Remember that, when the uterus forms the content of the sac, the tumor is hard, dull on percussion, with no impulse on coughing.

Remember that bimanual examination reveals the absence of the uterus and vaginal examination reveals the cervix pulled toward the affected side.

Keep in mind that when a pregnant uterus forms the contents of the sac the tumor gradually increases in size as gestation progresses.

Remember that hernia must be distinguished from hydrocele, enlargement of the vulvovaginal glands, and tumor of the labium majus.

Treatment.—Remember that treatment may be palliative or radical. When the contents of the hernial sac can be returned to the abdominal cavity and retained by a well-fitting truss, the palliative treatment may be followed with a certain degree of

safety. But it should be made very plain to the patient that it is only for the purpose of temporary relief or until a more convenient time, when she can submit to a radical cure; that it is extremely dangerous for a woman (at least in the child-bearing period of life) to have a hernia.

Remember that with incarceration or inability to prevent the escape of abdominal viscera with a truss the operative procedure becomes imperative.

Remember that the surgical procedure offers the only cure and during the child-bearing period this is of great advantage for the future safety of the patient.

Remember that the steps of the operation are the same as for the cure of inguinal hernia in the male, with the exception of the absence of the spermatic cord, which of course does not necessitate a reconstruction of the inguinal canal. If the hernial sac contains the uterine fundus and pregnancy occurs, abortion is more than likely at the third or fourth month.

Remember that in operation for the cure of a hernia of the uterus, where it is acutely inflamed, it may necessitate the removal of the uterus also.

CHANCROIDS.

Remember that the primary chancroid may occur on any part of the vulva but is most commonly found on the fourchette, labia majora, nymphæ, and vestibule.

Remember that secondary inoculations from the original ulcer are very common in women, due to the proximity of the two sides of the vulva and the difficulty of keeping the parts clean.

Remember that chancroids are usually found in the lower class of prostitutes because of their indifference with whom they cohabit, and uncleanliness.

Remember that the course and duration are less favorable in females than males, because the external genitalia are constantly exposed to the leucorrheal discharges, menstrual blood, urine, and friction in walking.

Remember that chancroids usually appear in five or six days after sexual intercourse and never later than twelve days.

Remember that they are rapid in development and there is a great tendency to suppuration of the inguinal lymphatic glands.

Remember that the inflammatory reaction of the ulcer makes it very painful to the touch and that it has a punched-out appearance, but there is no induration around the ulcer and the edges are undermined.

Remember that the floor of the ulcer is uneven and covered with a yellow débris. The secretion is yellow or brownish and has a penetrating nauseous odor.

Remember that the discharge is infectious and autoinfectious, so that new ulcers may continue to form.

Now keep in mind that there is often great pain and suffering accompanying chancroids—this pain and suffering is usually in proportion to the amount of ulceration—walking becomes difficult and micturition painful; these patients will have a sick and agonizing expression of the face.

Remember that if not checked the area of ulceration may become quite extensive, the labia may be penetrated from ulceration completely through the tissue, and when finally it is made to heal the vulva will present a scarred and ugly appearance.

Remember that these patients are exceedingly anxious to be assured that they are not the victims of syphilis; this is often quite difficult to do in view of the facts that promiscuous intercourse may have been indulged in, making a history impossible or worthless, and we may have a mixed infection. If in doubt, it is best to wait and anticipate secondary manifestations before instituting general specific treatment.

Treatment.—Remember that the first thing to do is to convert the sore into a non-specific ulcer and this may be done by cauterizing the ulcer. The thermocautery may be used, but the ulcer should first be anesthetized by a solution of cocain.

The application of undiluted phenol to the ulcer, followed by alcohol, or the use of nitric acid, may be used to destroy the infection.

The vagina and vulva should be thoroughly douched with a hot lysol solution and dried, and the

ulcer dusted with iodoform, aristol, or the subiodid of bismuth.

The labia should be held apart by a pledget of cotton, and a T-bandage applied.

The parts should be cleansed daily with hot lysol solution, or bichlorid of mercury 1:2000, followed by saline solution and powder dusted on the ulcer.

Now remember that these unfortunate women apply for treatment largely on account of the pain they suffer. Some attempt has been made to treat themselves until the pain becomes unbearable.

Compresses of lead and opium, frequently changed, are often useful, and compresses wrung from hot water give relief. Sometimes pledgets of cotton saturated with 2 per cent cocain solution have to be applied to the ulcers in order that the patient may have a few hours' rest.

In some the pain and progress of the chancroids are so persistent that they seem to resist nearly all kinds of treatment. The author found, by referring some of these cases to Dr. H. M. Lyle (dermatologist), that almost instant relief from pain was obtained from the use of the so-called leucodescent light. After a few treatments the pain will not return, the secretions from the ulcers cease, and they present a healthy granulating surface. We now have in our clinic a 62-candle-power electric light with a strong reflector, with which we treat these cases, applying heat for five to ten minutes daily, from which we obtain happy results. In conjunc-

tion we have used scarlet-red ointment 5 per cent (P. D. Co.), which we believe is of much value.

When healthy granulations begin to form, discontinue the powder and apply a stimulating ointment, such as 2 per cent of phenol in benzoated oxid of zinc ointment, or one part of the ointment of mercuric nitrate to seven of vaselin. If a bubo develops, it should be painted with the tincture of iodin, and the patient kept in bed; and should it persist and suppurate, it should be freely incised, and the gland curetted away. Wash out the cavity with hot lysol solution, dry, and pack with gauze.

The general health of the patient may be such as to demand an iron tonic, rest, and plenty of good food.

Remember that there is always danger of a general sepsis in all these cases, and the gravity of such in nowise differs from other septic infections.

Remember that exuberant and unhealthy granulation of an ulcer demands the application of silver solution, or the stick may be used.

CHANCRE.

Remember that the primary lesion or hard chancre is frequently not to be found on the female genitalia, thus being the opposite to the rule in the male. It is sometimes found on the lips or in the mouth. The most common situation of the chancre, however, is on the labia majora.

Remember that chancre is very frequently over-

looked unless the examination is most carefully made, owing to the conformation and the relation existing between the various parts.

Remember that the appearance of the secondary or tertiary symptoms may be the first intimation of syphilis and no history of the primary sore be obtained.

Remember that the primary lesion is, as a rule, single, but may be multiple or mixed with soft chancres.

Remember that the ulcer is superficial, flat, of a reddish or grayish color with a smooth floor. There is an area of induration around the ulcer, which is hard like cartilage, and the edges are never undermined.

Remember that the enlargement of the inguinal glands usually occurs but they do not suppurate.

Remember that a syphilitic ulcer does not present the angry appearance and destructive characteristics of the chancroid. The edges slope inward, and there is not such a marked inflammatory reaction in the adjacent tissues.

Remember that the period of incubation is from two to three weeks, or even longer, thus differing markedly from chancroid.

Remember that the secondary lesions on the vulva usually appear as mucous patches, or condylomata.

The condylomata vary in size from a split pea to a thumb-nail and are slightly elevated and flattened, with a shedding of the epithelium covering the area.

They may appear at any time during the first twelve months and may be single or multiple. They are most commonly found on the labia minora and the inner surface of the labia majora.

Remember that the *Spirochæta pallida* can be found in all forms of syphilis and it is important to examine secretions or pieces of tissues.

Treatment.—Remember that it is very important to make a diagnosis before adopting any line of treatment that will influence the clinical picture.

After a diagnosis is made the local treatment is simply that of cleanliness.

Bichlorid 1:2000, as a wash, lysol 2 per cent solution, are excellent. After cleansing use some dusting powder. Calomel is frequently used as a dusting powder, as it relieves irritation. Where there is a tendency to bleed, a 10 per cent solution of copper sulphate is good, or the use of the silver stick.

If the case is seen early, it is good practice to excise the sore with a sharp electric cautery.

The chancre usually heals without any trouble, and one of the greatest difficulties is to make the patient understand that she is not entirely well and will not be until she has undergone a thorough course of general medication.

Now remember that it is largely for this reason that no internal treatment should be given, if there is the slightest doubt in the diagnosis, until after the secondary manifestations appear. At any rate,

the visual demonstration is the most impressive to the patient, and then, of course, internal treatment should be instituted.

VERRUCÆ.

Remember that there are two varieties: verruca vulgaris, or common wart; and verruca acuminata, or venereal wart. The vulgaris usually is not tender and often appears in groups. It may or may not be pedunculated and is attached usually by a broad base.

Remember that verrucæ acuminata are cauliflower excrescences. They grow very rapidly and may attain the size of a fist.

Remember that the color will depend on their vascularity and the condition of the epidermis. If the epidermis is present the surface is dry, and the color that of the surrounding skin or mucosa. When the epidermis is removed by secretion or maceration, they are deep-red or purplish, and the discharge purulent, offensive, and highly irritating.

Remember that they may be found any place on the vulva, around the anus, and on the inner surfaces of the thighs.

When they are large they interfere with walking and coitus.

Remember that in old women they may undergo malignant degeneration or become gangrenous and cause death.

Remember that the discharge is virulent and may

cause purulent ophthalmia, following labor, or may cause urethritis in male, or produce general sepsis in the patient.

Treatment.—General.—In some cases there is an impairment of the general system; especially in strumous or anemic children, it will be necessary to administer a general tonic and hematonic. The following are recommended: arsenic, mineral acids, iron, bitter tonics, and cod-liver oil.

Tincture of thuja ♏v (t. i. d.); tincture of iodin ♏x, twice daily are considered to have a more or less specific action upon warts.

Local.—The common wart is best treated by excising with a pair of scissors and cauterizing the base with phenol, or the actual cautery.

Venereal warts require the vaginal discharges removed by daily antiseptic douches.

Next is excision, if possible, of the growth. This may be done under local anesthesia if growths are not too extensive, when a general anesthetic should be given.

The wound should be cauterized and dressed with antiseptic powder, such as calomel or equal parts of bismuth subnitrate and prepared chalk, or equal parts of calomel and salicylic acid.

ADHESIONS OF THE CLITORIS.

Remember that the folds of the nymphæ may become adherent as a result of irritating discharges, inflammation, and uncleanliness.

Remember that the symptoms are local and reflex and they depend upon the extent of the adhesions.

Remember that in some cases sebaceous matter accumulates under the hood of the clitoris, producing irritation that causes local tenderness and pain.

Remember that the adhesions may cause masturbation or be the exciting cause of a morbid sexual desire.

Remember that adhesions are regarded by many authorities as a common cause of ill health in young women and an important factor in many of the various neuroses.

This is a very common trouble in little girls, but from either false modesty or a failure to recognize its importance, it is rarely treated.

Many of the thin, sickly looking little girls would develop into robust children (just as boys so frequently do after circumcision) if the hood of the clitoris should be thoroughly freed, and other points of irritation around the vulva be relieved.

Remember that a physical examination reveals the adhesions and it is decidedly not an unwise plan to examine all girl babies in second year for these adhesions.

Remember also that the lack of sexual desire in married women may be caused by the hood completely covering the clitoris, to which it is bound down by adhesions.

This portion of the female genital apparatus has not received proper attention. A woman marries,

and if she has to be a sexual slave, without sharing in its blessings, it is only considered that it is as it should be; notwithstanding the fact that she is well developed, capable of bearing children, and that there is no reason why she should not be able to properly perform the sexual act.

Treatment.—Remember that the only treatment is the separation of the adhesions by blunt dissection.

It is very difficult to break up these adhesions in a satisfactory way, in young girls at least, without a general anesthetic. If the patient is a married woman and can tolerate a little pain, it may be done by cocainizing the parts well with 10 per cent cocain solution, but it is not a very pleasant procedure for any woman; hence a general anesthetic is preferable.

Thoroughly expose the glands, cleanse the parts, and smear the raw surfaces with 2 per cent carbolized zinc oxid or vaselin.

The prepuce should be pushed back daily, and the ointment applied until there is no longer any danger of the formation of adhesions.

ADHESIONS OF THE LABIA.

Remember that this occurs more frequently in infancy, childhood, senility, and the unmarried.

It usually occurs between the nymphæ, but the labia majora, in rare instances, may be united.

Remember that inflammation, irritating discharges, and uncleanliness are the most common causes.

Remember that there may be all variations from the cementing of the nymphæ by abnormal discharges to a firm organic union due to the destruction of tissue, and sometimes it is congenital.

Remember that the patient complains of irritation and on urination the stream may be deflected upward. The menstrual flow may be retained in the vagina or be discharged with difficulty. Coitus is impossible or may be partly accomplished through the urethra; and if adhesions take place when a woman is in the pregnant state, the adhesions will form an obstruction to the delivery of the child.

Treatment.—Where the labia are simply glued together they should be forcibly separated with the thumbs, a vaginal douche given, and the labia kept apart with a pledget of cotton covered with phenolated vaselin, and a compress with a T-bandage applied. The dressing should be changed daily for a week or ten days.

Where adhesions have become organized or when the condition is congenital, it will be necessary to do a cutting operation.

If there is a partial opening, a grooved director is passed into the vagina, being careful to go below the urethra, and the labia are divided with a scalpel along the line of false union.

When no opening is present, and it can be determined that the closure has been caused by adhesions, the urethra is kept out of the way by a sound. The parts are put upon the stretch by lateral pressure

with the thumb and index finger, and an incision is made with a scalpel along the line of adhesions. As soon as the opening will admit it, the index finger should be introduced, and the incision extended the full length of the labia. The cut edges on each labium should now be coapted by chromic catgut sutures. The dressing to be applied is the same as described under forcible separation.

Remember, however, that most frequently, when the labia are united and the vaginal orifice is closed, the condition is usually congenital, with infantile uterus and appendages, or an absence of one or all of them.

Remember that frequently this condition is not appreciated by the mother, and in rare cases by the girl, until she has some thought of marriage. The author saw an Italian girl of 19, who applied for treatment three weeks after marriage. She had no vagina, and efforts at sexual intercourse had dilated the urethra so that it would admit the index finger to the depth of about an inch.

If she has not had the menstrual molimen and evidence of vaginal and uterine distention from the menstrual secretions, a very thorough examination should be made to ascertain if she has a uterus and ovaries; and if so, if they are fully developed or infantile in type.

Remember that if they are absent or rudimentary marriage should be discouraged as well as any effort to establish a vaginal canal. The disappointment

may be great, but not nearly so great as an impossible married life or an unsatisfactory attempt to establish a canal, with encouragement that sooner or later must be blasted.

HERPES.

Remember that this acute inflammatory affection is not contagious. It is frequently found in connection with menstruation in fleshy or neurotic women.

Keep in mind that anything causing irritation and congestion of the vulva often causes herpes, thus, in prostitutes, pelvic diseases, and pregnancy.

Remember that the eruption is preceded by tenderness, pain, burning, or itching, and in some cases, headaches, fever, and chilliness.

Remember that the lesion of herpes begins as a red spot, varying in size from a pinhead to a split pea. These soon change to vesicles filled with a clear serous or seropurulent fluid, with a red base, and usually arranged in groups.

Remember that the presence of heat, moisture, and friction soon converts the vesicle into an ulcer. These coalesce, and the discharge becomes offensive.

Remember that in eczema the vesicles are smaller, less flattened, there is more swelling of the skin, and a tendency of the disease to extend; while in herpes the vesicles occur in successive crops and are arranged in groups. They are situated on an inflamed base, and the attack is short in duration.

Keep in mind that chancroids give a history of

sexual intercourse five or six days, and never over twelve days, before the eruption appears.

Remember that the chancroid ulcer has a punched-out appearance, the margins are undermined, and there is the characteristic involvement of the inguinal lymph-glands.

Remember that chancre develops slowly, is single; the base is indurated, and the margins of the ulcer are sloping. There is an enlargement of the inguinal glands, but they seldom suppurate.

Remember that the course of herpes is short, usually lasting one or two weeks. The ulcers are generally superficial and rarely cause scars.

Treatment.—Remember that some of these cases need general as well as local treatment.

The cause should be sought and removed if possible. The digestive and urinary systems must be kept in normal condition.

During the acute stage walking or exercise of any kind should be forbidden.

A good general tonic should be given. The most commonly used drugs are the mineral acids, arsenic, iron, and quinin.

Local treatment should be carefully carried out.

The vulva and vagina should be douched once or twice daily with a hot lysol or bichlorid solution.

A hot sitz-bath is very soothing and beneficial.

A dry vaginal tampon should be inserted to protect the vulva from uterine or vaginal discharges.

After the douche the vulva should be thoroughly

dried, and a dusting powder used. Talcum, lycopodium, or oxid of zinc may be used.

For severe cases solution of silver nitrate, gr. x to ℥ j, may be painted on the vulval area involved, or phenol, 2 per cent solution in glycerin, is excellent. A T-bandage holds a compress in position.

ECZEMA.

Remember that this is a skin affection that presents various forms of lesions or a combination of them accompanied with itching, infiltration, and often attended with a discharge and the formation of scales and crusts.

Remember that the vulva is particularly liable, on account of the frequency of local and pelvic conditions that cause chronic irritation and congestion.

Remember that a diabetic urine will cause an intense eczema, as will also the irritation produced by a vesicovaginal fistula.

Remember that pruritus vulvæ is the most prominent symptom, while pain and burning are often complained of.

Eczema may be confined to the labia majora, or it may extend to the mons veneris, the perineal and anal regions, or the lower portion of the abdomen.

Remember that the senile changes that occur at the menopause appear to predispose to eczema of the vulvæ, and gastrointestinal disorders and gout are strong predisposing factors.

Treatment.—Remember that the diet is important.

Alcoholics, spices, and highly seasoned foods must be forbidden. The digestive and eliminating organs must be kept at par.

Remember that certain articles of food—such as pork, cheese, and shellfish—have an injurious effect and should be excluded.

Locally, cleanliness is of first importance in the treatment. The scabs and scales must be thoroughly removed so that the medicament may come in contact with the diseased surface. Instruct the patient to stoop over a pan of warm water, and using some good soap, such as sapo viridis, to wash the parts thoroughly with the hand and not to use a sponge or cloth. Dry the parts thoroughly. If this fails to remove the scales or crusts, a bland oil—such as olive, cotton-seed, or linseed—should be applied freely, and after the scales or crusts have softened, then wash the parts.

Should the soap and water aggravate the lesion, then the alkaline bath must be substituted. This consists of one ounce of bicarbonate of soda in five gallons of water. In acute cases this bath is very effective and should be used three or four times a day of fifteen minutes each.

In the use of lotions distilled water should be used, as hard water irritates the parts. Sedative and astringent lotions are often useful and are applied by means of lint compresses which are held in position with a T-bandage. Lead water and laudanum allay itching and burning. Equal parts of glycerin, lime-

water, and distilled water are excellent, especially when the affected parts are hot and dry. Serous oozing, burning, and pruritus are relieved by bicarbonate of soda or potassium, ʒ ij to one quart of distilled water.

Weak solution of carbolic acid, thymol, or alum; black wash; saturated solution of boric acid; and dilute solution of peroxid of hydrogen are all useful.

Many cases are best treated by ointments. Lanolin is the best base. A very excellent combination is the following:

℞ Ichthyoli .....3 ij
Unguenti hydrargyri ammoniati.....
Unguenti zinci oxidi .....āā q. s. ad ʒ ij
Misce et fiat unguentum.
Sig.: Apply locally.

Dusting powders may be used. They protect the parts and exert a sedative or astringent action. Starch, boric acid, talcum, subnitrate of bismuth, and calomel furnish us a list from which a dusting powder may be selected.

Bland oils, as cotton-seed, olive, almond, may be used over the affected parts.

THRUSH.

Remember that the same organism, *Saccharomyces albicans,* causing parasitic stomatitis, causes thrush of the vulva and vagina.

Remember that the disease is most frequently seen in nursing women, and those exhausted by some

chronic condition, as tuberculosis, diabetes, or malignant disease.

Remember that the surface is covered with slightly elevated, whitish spots that have a tendency to coalesce and eventually leave a small, painless ulcer.

Treatment.—Remember that the vulva and vagina should be douched twice daily with an antiseptic solution, as lysol, or bichlorid (1:2000).

A tampon, saturated with 25 per cent ichthyol in glycerin, should be introduced into the vagina. Dust the vulva with a powder composed of aristol, calomel, and subnitrate of bismuth, equal parts. Separate the labia, and apply T-bandage.

When the ulcers are slow about healing, touch them with silver stick, or silver solution, 2 per cent.

The patches should be washed several times daily with peroxid of hydrogen.

The constitutional conditions should receive appropriate medication.

SIMPLE DERMATITIS.

Remember that this is frequently known to the patient as chafing and is found most often in fleshy women.

Remember that this is produced by the rubbing together of folds of the skin. This is especially likely to occur where there is a leucorrheal discharge.

Remember that the local conditions vary between a simple erythema and a severe inflammation, depend-

ing upon the severity of the cause and the "tenderness" of the skin.

Remember that the condition gives rise to more or less of burning and itching, and in severe cases there is a serous secretion, which chafes both the vulva and the inner surfaces of the thighs.

Treatment.—Keep in mind that cleanliness is very important and the parts should be thoroughly cleansed by a carbolic wash, or the use of baking soda, a tablespoonful to a pint of water. The parts should be dried, and a drying antiseptic dusting powder used. The following make good dusting powders: boric acid, aristol, rice powder, or

℞ Zinci oxidi.....
Magnesii carbonatis.....
Phenylis salicylatis.....
Amyli .....āā ʒ ss
Misce et fiat pulvis.
Sig.: Dust freely over parts.

This washing should be done from three to six times daily.

In severe cases keep patient in bed and apply gauze soaked in calamine lotion:

℞ Zinci oxidi.....ʒ iv
Calaminæ præparatæ .....ʒ iss
Glycerini .....ʒj
Liquoris calcis.....q. s. ad ʒviij
Misce et fiat lotio.
Sig.: Apply externally.

In cases that are required to be about their work, an ointment may be used:

℞ Zinci oxidi.....3 ij
Phenylis salicylatis.....gr. xv
Adipis lanæ hydrosi.....ʒ j
Unguenti aquæ rosæ.....q. s. ad ʒ ij
Misce et fiat unguentum.
Sig.: Apply to parts frequently.

Or:

℞ Zinci oxidi.....3 ss
Bismuthi subcarbonatis.....3 ss
Phenylis salicylatis.....gr. x
Petrolati.....ʒ j
Misce et fiat unguentum.
Sig.: Apply freely to parts.

Or:

℞ Bismuthi subnitratis.....3 iss
Phenylis salicylatis.....gr. xij
Adipis lanæ hydrosi.....3 ij
Unguenti zinci oxidi.....3 vj
Misce et fiat unguentum.
Sig.: Apply freely to parts.

ERYSIPELAS.

Remember that this is an acute, contagious inflammation of the skin, caused by the *Streptococcus erysipelatis*. There must be a port of entry through a lesion, however small, and eczema, herpes, and erosions all furnish excellent conditions.

Remember that the general symptoms are chill, rapid rise of temperature, nausea or vomiting. The pulse is rapid, soft, but has a good volume.

Remember that locally the parts become swollen, of a red, shining appearance, and the margins may be felt because of elevation above healthy skin. The

line of demarcation is sharp, but the edges of the inflammation progress daily; while resolution occurs in center or oldest part of the affection. The patient complains of pain, heat or burning, and pruritus. Vesicles may form over the involved area.

Remember that in severe cases abscess formation may occur, or where the edema is great gangrene may follow.

Treatment.—Remember that the treatment is both local and general.

General.—The bowels should be moved with cathartic or enema of water and glycerin.

Where the patient is robust, calomel, followed by saline, should be the cathartic of choice.

In weak, asthenic cases violent purging does harm by further depressing the vital powers, and the enema of glycerin and water should be used.

The patient should be confined in bed, and the use of a bedpan is important, so that the inflamed area will not be mechanically injured by friction.

Remember that it is important that the patient's strength and vitality should be conserved by every means, and stimulants used freely when needed. Of the stimulants none are better than strychnin or whiskey given to full effect.

The fever should be controlled by the ice cap and sponging. Either water, or water and alcohol or vinegar, may be used.

Remember that under no conditions should anti-

pyretic drugs be used, because of their depressing effect on the heart.

Pilocarpin hydrochlorate hypodermatically, gr. ⅛ to ⅙, may be used to great advantage in strong healthy subjects. When used it should be early in the disease.

Quinin hydrochlorid in two-grain doses every three hours is beneficial, because of its power in small doses of stimulating the leucocytes, but the massive doses should never be used.

Tincture of the chlorid of iron has been thought to be very beneficial.

Local.—A good warm antiseptic douche for the vulva and vagina is indicated.

Lysol, 1 to 2 per cent, corrosive sublimate solution (1:4000), or phenol solution are all good.

The parts should be dried, when either of the following may be applied:

Credé's ointment rubbed thoroughly into the inflamed area; or equal parts of ichthyol, tincture of iodin, and glycerin painted over the area infected; or an ointment composed of equal parts of ichthyol and lanolin may be rubbed well into the parts; or a hot strong lysol compress may be applied; in all cases a dry dressing as a covering and a T-bandage are applied.

The dressing should be changed twice daily until the inflammation begins to subside and desquamation begins, when the benzoated zinc oxid ointment should be used.

Where the pain and local irritation are severe a lotion of lead water and laudanum may be advantageously used.

The hypodermic injection of bichlorid of mercury into the healthy skin immediately surrounding the infected area may be used. The solution is in the proportion of 1 to 4000 of water. It is very painful.

VAGINISMUS.

This affection is due to a hyperesthetic condition of the vulvovaginal orifice, causing painful and spasmodic contraction of the muscles of the floor of the pelvis.

Remember that the condition is usually found in young, neurotic, hysterical women. It is frequently caused by a carbuncle, erosion, fissure, or irritable hymen. Lead poisoning and masturbation are said to be frequent causes.

Remember that the intensity of the symptoms varies. There are cases where the attempted introduction of a urethral catheter or digital examination will cause a painful spasm.

Where the cause is a local lesion the convulsion will develop slowly, and the patient locates the pain at the site of the lesion; but the sensitive area gradually extends until the entire surface of the vulva becomes hyperesthetic.

Remember that many of the cases suffer from neuralgic dysmenorrhea, and the bladder and rectum eventually become irritable.

Treatment.—Remember that the treatment should be directed to removal of the cause as well as for the temporary relief of the symptoms.

Remember that cases depending upon brutal or ineffectual coitus present no local lesion and treatment demands proper education in the sexual act.

Remember that a 5 per cent solution of cocain applied on a pledget of cotton for a few minutes will relieve slight cases brought on by sexual intercourse. The application should be made just before coitus.

Painting the affected parts twice a week with a 4 per cent solution of silver nitrate, or the use of rectal suppositories of opium and belladonna, is often beneficial.

Remember that severe cases demand a more or less radical procedure. Two methods may be employed to advantage: viz., forcible dilatation; or in extreme cases incising through vaginal mucous membranes and into fascia in each lateral sulcus, producing an artificial perineal laceration, as it were.

Forcible Dilatation.—A general anesthetic is required, and the patient is placed in the dorsal position, with the knees flexed on the abdomen.

Now, by using the thumb, the vaginal entrance is thoroughly stretched. If the cases require it, a Sims' glass vaginal plug may be introduced to prevent contraction (this is rarely necessary if the stretching has been thorough). The patient should be kept in bed for a week or ten days. If it is found

necessary to use the glass plug, remember that it will in all probability have to be removed during defecation and micturition, or it has to be removed daily for the use of antiseptic vaginal douches. Now this handling of the glass plug causes much pain and annoyance, and the chances are that its use will have to be discontinued after one or two attempts to reinsert it.

Remember that to be of benefit the plug should be sufficiently large to stretch the parts; if it can be tolerated by the patient, she should be instructed, after about two weeks under physician's care, to introduce the plug at bedtime and remove it in the morning. This treatment should be continued for five or six months if necessary, and the patient should report frequently to her physician for examination and advice.

Remember that these patients should be required to take a certain amount of systematic exercise in the open air; plenty of rest and sleep is necessary, and a good general tonic is indicated.

Operation.—Patient in dorsal position; two deep incisions about one inch long are made in each vaginal sulcus. They unite at the perineal center and are continued halfway down to the anus. The incisions should be deep enough to divide the fascia and underlying muscles. The incisions are closed with a catgut suture.

CHAPTER III.

DISEASES OF THE VAGINA.

ACQUIRED STENOSIS AND ATRESIA.

Remember that stenosis means narrowing of the vagina by cicatricial contraction; atresia means obliteration of the canal by the agglutination of apposed granulating surfaces.

Remember that this condition may occur at any part of the vagina or may involve the entire canal.

Remember that lacerations from labor, or foreign bodies—such as badly fitting pessaries—are frequent causes, and from any cause, if enough tissue has been involved, may produce enough scar tissue during the healing process to cause stenosis.

Remember that sometimes a faulty operative technic, in the repair of lacerations, or excision of labia, may narrow the vagina and cause stricture.

Remember that often the symptoms are not pronounced until there is sufficient obstruction to prevent the escape of vaginal discharges or menstrual blood, or to interfere with sexual intercourse.

Remember that coitus is only partially interfered with when the obstruction is situated in the upper

part of the vagina and when there is no tenderness in the parts.

The obstruction will be encountered by the examining finger at the site of stenosis, whether near the vulva or high in the vagina.

If there is a complete stenosis of the vagina, the patient should be examined by the rectoabdominal route to ascertain the size, position, and condition of the uterus and appendages, or if there is any retained menstrual fluid in any part of the canal. If so, the upper part of the vagina or uterus, or both, will be distended and have a rather boggy feel. This fluid may have partially escaped through the Fallopian tubes into the peritoneal cavity, giving more or less peritoneal irritation.

Treatment.—Do not attempt any stretching or operative work for this trouble with local anesthesia. A general anesthetic must be given.

With the patient in the dorsal position, do not attempt much cutting, if there is stenosis, without a sound in the bladder and the finger of the assistant in the rectum to use as guides, thereby protecting these organs from injury.

Remember that in atresia a piece of gauze over finger tips will aid materially in dividing adhesions. All raw surfaces should be covered as much as possible, and if this cannot be completely done, the daily application of carbolized vaselin must be employed to prevent the raw surfaces from agglutinating.

Do not leave ragged adhesive bands; they should be cut close to the vaginal wall, and a suture placed across to cover raw edges.

Bear in mind that sutures should be placed in the long axis or parallel with the vagina; if introduced transversely, particularly if considerable sewing is done, they have a tendency to narrow the canal.

Remember that, if there has been much deep scarring, it will be impossible to stretch this tough fibrous tissue and it may become necessary to make several deep parallel incisions; the mucosa should be dissected loose from the deeper tissues to allow the cut mucous surfaces to be reunited by sutures as far as possible; the mucosa, even if thick and made up largely of scar tissue, will allow of considerable stretching. All bleeding surfaces and points in the deeper tissues must be controlled first, and finally, it may become necessary to use a glass or rubber plug to keep the parts dilated to a sufficient caliber until healing has been perfect.

Acquired stenosis must not be confounded with the congenital variety, referred to in a previous chapter (Adhesions of the Labia, Chap. I, page 62), where the trouble is due largely to a lack of development instead of a diseased or pathological condition.

Remember that these patients suffer much pain for the first three or four days and will require opiates, etc., as indicated. There will be some vaginal discharge, which must be kept clean, if a

plug is used that will have to be removed daily. Saline douches, or, if there is some odor, formaldehyd douches (ʒj of formaldehyd to Oiv of warm water) should be used once or twice daily.

CYSTOCELE AND RECTOCELE.

Remember that lacerations of the peritoneum may destroy the retaining power of the pelvic floor; there will be a gradual prolapse of the anterior and posterior vaginal walls. If it is of the anterior vaginal wall containing the bladder, it is known as anterior colpocele or cystocele; if it is of the posterior vaginal wall, it is known as posterior colpocele or rectocele. As a rule, both are found prolapsed in some degree in the same individual.

Keep in mind that, with a deep anterior and posterior laceration, the daily efforts and straining at stool and micturition will eventually force the posterior wall of the bladder and the anterior wall of the rectum out, until they present as pouches with the vaginal mucous membrane for a covering.

Remember that this is a condition found in the woman who has borne children.

It is always associated with prolapse of the uterus in the second or third degree, but remember that we may have cystocele or rectocele, or both, without the uterine prolapse.

There may be considerable sagging of the bladder without any well-defined symptoms; but as a rule, there is more or less vesical irritation from the great

effort or inability to entirely empty the bladder; the urine has to travel up hill, as it were, and in exaggerated cases the patient will be obliged to take her hands and elevate the bladder into the vagina in order to expel the urine.

Keep in mind that in this class of cases there will always be residual urine, which becomes alkaline in reaction, loaded with sediment, and is the cause of much vesical irritation.

While there should be no difficulty in making a diagnosis of cystocele, yet it is well to remember that if there is bulging of any character from the vagina the patient will speak of the condition as "falling of the womb," and while there may be some degree of prolapse, yet the protruding tumor is in reality the bladder.

Remember that, if there be a doubt, a curved sound may be introduced, when the end will be found to travel to the lowest point of the pouch, where it can be plainly felt through the tissues with the fingers.

Remember that the vagina may be filled with sterile water, when the tumor may be observed as it enlarges and diminishes in size when the water is syphoned away.

Remember that a vaginal hernia, if it contains intestine, is tympanitic on percussion, gives the characteristic impulses on coughing, and when returned the bladder will be found not displaced. A sound may be introduced into the bladder while the tumor

is down, when it will be found that it has no connection with the bladder.

Remember that vaginal tumors do not vary in size or impulse upon coughing, straining, or filling of the bladder; they are stationary and cannot be returned, as can hernia or prolapse of the bladder.

Remember that cystocele and rectocele usually occur together and are due to the same cause: viz., anterior and posterior perineal lacerations.

Symptoms.—Remember that with the general loss of tone, with sagging of practically all the pelvic viscera, there will be a feeling of fulness and weight in the pelvis; legs and back tire and ache. Constipation and difficulty in defecation—the force of the bowel contents—cause the anterior rectal wall to bulge out of vagina, and this has to be held back with the hand or fingers of the patient to make defecation possible. Autointoxication follows constipation, gastrointestinal disturbances, and headaches.

Diagnosis.—The diagnosis of rectocele is not a difficult matter. With the unmistakable perineal laceration in view, there is more or less bulging of the posterior vaginal wall; by introducing the index finger into the rectum, it can be hooked around, and the end brought into the vaginal pouch, revealing a relaxed anterior rectal wall with the tissue very thin between the finger in rectum and the other hand with which the pouch can be held.

Treatment.—Remember that the treatment for

cystocele or rectocèle must always be radical if a cure is desired; local palliative treatment consists of an effort to keep the parts as well up as possible and by symptomatic treatment to make the patient as nearly comfortable as possible.

These patients wear pessaries with difficulty; they are very difficult to retain, and if large enough to remain within the vagina, produce pressure pain and often increase the bladder symptoms.

If the uterus is prolapsed, a cup-and-stem pessary with an elastic T-bandage may be tolerated and worn with some degree of relief.

Tampons of iodin and glycerin, or tannic acid and glycerin, help to relieve congestion, and by the astringent effect help to retain the bladder within the pelvis.

Remember that some benefit may be derived from wearing clothing that does not cause constriction around the waist; to keep off feet as much as possible and only do very light work, if any at all; the bowels should be moved daily with salines, and the bladder emptied every four to six hours.

Remember that any other internal treatment can only be of benefit to relieve distressing symptoms as they arise.

Radical Treatment.—When there is sufficient relaxation and prolapse of the anterior vaginal wall to require operation, this should be taken care of at the same time that the posterior perineal tear is repaired.

Remember, if there is much sagging, that it may be necessary to follow one of the various operations suggested for the relief of this condition. Hegar's operation, anterior colporrhaphy, consists in removing strips of tissue from cervix up over vault of vagina, out to the vestibule, until a large elliptical area has been removed. The apices point to the vestibule and cervix; the lateral edges are two inches or more apart, so that a deep row of catgut sutures are first required, after which the lateral edges of the vaginal mucosa are brought together with chromic catgut, beginning at the cervix and finishing at the vestibule; this narrows the vaginal vault and has the effect of pushing up both the uterus and bladder. If there is a cervical laceration, that too must be repaired.

Remember that by repairing the posterior perineal laceration much is done to hold up both the uterus and bladder.

For the cure of rectocele, repair of the perineum or perineorrhaphy must be done.

It is needless to discuss today any operation on the perineum which is not founded on anatomical principles; the latter perfectly restores the perineum and vagina, while the denuding operations narrow the vagina and pucker the underlying tissues without any attempt at restoration to normal.

One of the best operations devised at the present time has been worked out by Dr. Howard Hill, and is based on the normal anatomy of the perineum. It

is simple and can be done in fifteen or twenty minutes; there is no destruction of tissue.

Either a lateral incision along skin and mucous membrane line, or antero-posterior incision may be made. By blunt lateral dissection the anterior edges of the levator ani muscles may be felt and caught with small "tenaculum forceps." The two edges are brought together and held by two catgut sutures properly placed, so as not to impinge too much on the vaginal orifice; the lower suture should catch some of the fibers of the sphincter ani. Next, the fascia is closed with chromic catgut, and finally, the superficial opening closed with the same suture. The author now puts in two rather deep silkworm-gut sutures, after all the tissues have been closed to re-enforce the catgut sutures; these are removed in about ten or twelve days.

Remember that, if the cystocele and rectocele were very troublesome, and particularly if there was some uterine prolapse, the anterior and posterior perineal repair may not be sufficient to give perfect relief, and if the uterus pushes down very hard will finally force its way to the vulva.

In these cases a combined laparotomy should be done, and the uterus raised out of the pelvis and held in place by some operation of shortening the round ligaments. The author prefers the Crossen modification of the Gilliam-Ferguson operation. The posterior wall of the bladder being attached to the uterus, the anterior wall of the rectum, as well,

is attached to the uterus behind; hence, when the uterus is raised by shortening the round ligaments, the bladder and rectum are also raised and held in place.

Now remember that, if the vaginal prolapse is very great and the uterus presents itself outside the vulva, the additional operation of shortening the round ligaments will not be sufficient. These women have given birth to several children and are usually near or past the child-bearing period.

Remember, then, that in these extreme cases a more radical procedure is necessary. Excellent results are obtained by raising the uterus out of the pelvis into the abdominal wound, closing the peritoneal opening above and below, and sewing the sides to the uterus; the muscle and fascia are also brought around the uterus in the same manner. The point of thus fixing the abdominal wall to the uterus depends upon the degree of relaxation, and the uterus may be raised or lowered to suit the case before it is finally fixed. After the skin has been closed, the fundus rests in the fat between the skin and fascia. This precludes any further danger of prolapse.

HERNIA.

Remember that a vaginal hernia starts either behind or in front of the broad ligaments. When it starts behind it begins in the cul-de-sac of Douglas and descends between the rectum and vagina; then,

separating the fibers of the levator ani muscle, it appears either at the posterior part of the labium majus, or in the perineum. Starting in front of the broad ligament, it pushes the vesicouterine peritoneal fold down between the vagina and bladder, and appears at the posterior part of the labium majus.

Remember that if located in the anterior or posterior wall of the vagina the size of the tumor increases on coughing or straining.

Remember the gurgling sound so characteristic of the replacement of the contents of a hernial sac into the abdomen.

Remember that cyst of the vulvovaginal gland or tumor of the labium is smooth and firm, and does not disappear on pressure, or is it influenced as to size by coughing or straining.

Remember that a hernia has a doughy feel to the examining finger and is tympanitic on percussion.

Treatment.—Remember that the reduction of the hernia is easily accomplished by first emptying the bladder and rectum, then placing the patient in the knee-chest position, and making steady pressure upon the tumor until the contents of the sac slip back.

Remember that a hard-rubber ring pessary large enough to distend the canal may be used to control the hernia. The ring should be as large as can be inserted and should be carried well up into the fornices, the ring surrounding the cervix uteri.

Treatment of Vaginolabial Hernia.—Remember that this variety of hernia occurs more frequently anteriorly to the broad ligament than it does posteriorly. It can usually be replaced with the patient in the knee-chest position, except in case of strangulation. The operative treatment is practically the same as for hernia elsewhere.

Vaginal Route.—If the vagina is roomy and the surgeon can demonstrate to his satisfaction that he can reach and approximate the tissues, this route may be chosen. The overlying tissues are incised and dissected away until the sac is isolated. It should be opened, and the contents well returned; after which the sac should be loosened from the fascia, surplus cut off and closed. Then the fascia is closed outside of sac, and finally the vaginal opening.

Dangers.—Great care must be exercised so as not to injure the bladder; great difficulty may be encountered in keeping back abdominal contents while sewing up peritoneum; great caution must be exercised during the entire operation lest the bladder is punctured by the needle.

Remember that, if there is strangulation, the vaginal route is out of the question.

Abdominal Route.—This is by far preferable to the vaginal route. Here one can get all the tissues out of the way and protect the bladder, closing the hernial opening, and then inverting and closing the peritoneal opening after the excess of sac has been trimmed off.

VAGINITIS.

Remember that inflammation of the vagina is nearly always associated with and is frequently the cause of vulvitis. It can usually be traced to some infection.

Remember that, while the normal acid secretion of the vagina is a germicide under ordinary conditions, yet, in cases of pelvic tumors, displacements, or inflammation of any portion of the genital tract, there will be sufficient alteration of the vaginal secretion to overcome its germicidal action.

Remember that this is also true in anemia, tuberculosis, or any of the debilitating diseases when resistance generally is below par.

Simple vaginitis means an irritation and congestion (which has not quite reached the point of inflammation) of the vaginal mucous membrane, with an increase of the mucous secretion. No doubt these cases owe their origin to the debilitating diseases just mentioned, and the treatment must be general as well as local, and directed to remove the cause.

Remember that while this is a case of simple vaginitis the patient is not proof against infection. In fact, it is quite the reverse; with her entire system debilitated from disease, her resistance lowered, and the vaginal mucous membrane irritated and congested, a severe infection might ensue.

Remember that in the large cities at least, gonorrhea is doubtless responsible for the greatest num-

ber; but remember that unsterilized instruments used by examiner, or a douche-nozzle that has been used by another person, may carry the gonococci, streptococci, staphylococci, or the colon bacilli into the vagina; pessaries that are not sterile or are poorly fitting may produce an irritation; or the use of the various antiseptic tablets for the prevention of pregnancy may be responsible.

Remember that uterine discharges from acute septic endometritis will cause vaginitis; this rarely occurs from a chronic discharge. It should be remembered, however, that, when a patient with a chronic discharge is confined in bed from any cause, a cleansing douche should be given once daily; otherwise the discharges will be retained in the vagina, where they decompose and cause irritation.

Remember that frequent sexual intercourse or a great disproportion between the male and female is sometimes responsible for vaginitis.

Remember that at first the vaginal walls are red and hot from acute congestion.

Remember that early in the disease there is but little discharge but later the parts may become bathed in serum and pus.

Remember that in neglected gonorrheal vaginitis the discharges are so irritating that there will be found a large area around the vulva extending out on the thighs and down around the anus, where the skin will be red and edematous. Painful fissures and erosions follow, or, from continued irritation

and stimulation of the skin, numerous papillary growths develop.

Remember that in the acute cases pain is severe, particularly upon manipulation, and if there is also vulvitis, it is sometimes difficult or impossible for the patient to walk or to be on her feet.

Remember that in chronic vaginitis the discharges persist, loaded with epithelium, exfoliated from the vaginal walls. This leaves the papillæ exposed and swollen, on account of denudation of their epithelial covering, giving a rough feeling, or the condition known as granular vaginitis.

Symptoms.—The patients have first a feeling or sensation of heat and dryness in the vagina, with a slight itching at the vulvar outlet.

Remember that, as a rule, these patients do not manifest any general systemic reaction, although it stands to reason that there is some inclination to febrile disturbance; the greatest discomfort, no doubt, is the sensation of fulness and heat communicated to the rectum and bladder. A frequent desire to urinate may be felt.

Remember that the discharge is not great, and sometimes absent, in the beginning; however, after a few days, it becomes profuse and purulent.

Diagnosis.—Examine the external urinary meatus, which is often visibly affected and bathed in pus; if so, it may be gonorrheal infection.

Remember that all vaginal discharges should be submitted to a pathologist for examination.

Treatment.—Rest is one of the best agents in the treatment of acute inflammatory diseases, and during the acute stage of vaginitis it should be enforced unless it is absolutely necessary for the patient to work daily to earn her living. Do not be unreasonable; some women are obliged to support a whole family, and it is a serious loss if they are obliged to be away from their work.

Remember that, if the pain is sufficient or the annoyance of burning and itching great enough to require a sedative, it must not be administered in the form of a rectal suppository; nor should an enema be given during the acute stage, for fear that the infection might be carried into the rectum. Have the patients take long copious hot douches three or four times a day, or as often as their duties will permit. To three or four quarts of hot water may be added one teaspoonful of formaldehyd, 40 per cent, powdered borax, or boracic acid. Use local treatments every other day. Clean out vagina by use of a speculum and cotton pledgets squeezed from hot water; after this a thorough application of silver nitrate solution, 4 per cent, may be applied with a cotton swab over the entire vaginal and cervical surfaces. Do not use this too often; once or twice weekly may be sufficient; then place a tampon of some of the glycerin mixtures (preferably with ichthyol, 20 per cent) against the cervix, and instruct patient to leave it in place for eight or ten hours. After its removal a hot douche should be taken.

Remember that if the vagina and vulva are too sensitive to admit the use of a speculum hot douches must be relied upon until the acute symptoms subside or the tissues become more tolerant.

Remember that constipation contributes to pelvic congestion and salines should be administered as often as indicated.

Keep in mind the benefits derived from drinking plenty of water, and this is especially true when there is urethral or bladder complications. When there is considerable vesical disturbance use oil of wintergreen, 10 minims, four or five times daily; tincture of belladonna in 5-minim doses relieves vesicle irritation.

When astringent powders are used instead of the solutions, boric acid, zinc oxid, calomel, or tannin are the best. Half an ounce of powder should be placed in the vaginal vault, and a dry tampon inserted to hold it there.

GRANULAR VAGINITIS.

Remember that this is the most frequent form of vaginitis and the granular appearance of the mucous membrane is due to the inflammatory congestion of the papillæ.

Remember that this form may result from simple or gonorrheal vaginitis.

Remember that the patient complains of tenderness with a feeling of pelvic fulness and a mucopurulent discharge.

Remember that pruritus vulvæ is a more or less constant symptom and eczematous eruption may occur on the external genitalia.

Remember that the diagnosis is made by inspection of the vaginal canal and this is best done with the patient in the knee-chest position.

Remember that this condition occurs sometimes during pregnancy and at its termination will disappear.

Treatment.—Remember that the bowels should be kept open with a mild laxative.

The vagina should be douched daily with a gallon of hot salt solution, followed by a half gallon of bichlorid solution (1:4000), or a gallon of hot lysol solution, 2 per cent, may be used.

When an astringent is needed nothing is better than a 5 per cent solution of silver nitrate painted over the granulations.

A tampon saturated with a 25 per cent solution of argyrol, protargol 3 per cent, or boroglycerid, should be introduced and remain for twenty-four hours.

Sometimes the application of sulphate of copper (gr. xxx to ʒj) to the granulations will hasten a cure.

SENILE VAGINITIS.

Remember that this is the change brought on by old age and is found in women who have passed the menopause.

Remember that the symptoms are, as a rule, not

pronounced. The patients complain of a thin leucorrheal discharge, usually not profuse, and occasionally streaked with blood.

Remember that this discharge may be very irritating to the external genitalia and cause a pruritus or severe burning sensation.

Remember that inspection reveals a mucous membrane that is smooth, atrophied, and covered with a scanty secretion. Various-sized spots of ecchymosis and superficial ulcerations are found scattered over the surface.

Remember that adhesions are formed from contact between ulcerated surfaces and the vault, or even the canal may be obliterated in this manner.

Treatment.—If the condition causes no annoyance to the patient, no treatment is needed, except a daily cleansing douche.

When the ulcers are present and painful, they should be painted with a 5 per cent solution of silver nitrate. A hot antiseptic douche of one gallon should be taken daily. This may consist of a 2 per cent lysol solution, or bichlorid (1:6000).

Where adhesions do not interfere with secretions and are old and dense, they should be let alone. When recent, they are easily broken up. A tampon upon which some ointment has been spread should be inserted. Either of the following may be used: vaselin, zinc oxid ointment, to which is added 3 per cent phenol. This prevents the reforming of the adhesions.

CYSTS.

Remember that cysts are the most common form of neoplasms found in the vagina. While they are found usually in the anterior or posterior wall, they will be found occasionally in other portions of the canal. As a rule, they occur singly, and they grow very slowly and require years to develop.

Remember that the cyst is round and circumscribed, as a rule, but exceptionally it may be pear-shaped and have a pedicle.

Remember that if inflammation has not occurred the cyst is freely movable beneath the mucous membrane.

Remember that the symptoms vary with the size and location of the cyst. Thus it may press upon the urethra and interfere with the voiding of the urine, or by pressure upon the bladder wall lessen its capacity, and thus cause frequent micturition.

Remember that a cyst pressing upon the rectum causes a feeling of weight in the pelvis and produces constipation and hemorrhoids.

It may be so located as to interfere with sexual intercourse by obstructing the entrance of the penis.

Remember that a very important feature in diagnosis is to demonstrate that the tumor is movable and not fixed to the wall of the vagina. This is done by grasping the enlargement with the fingers and making traction in different directions in order to demonstrate by touch its connections.

Remember that the combined rectovaginal touch must be used if the cyst is on the posterior wall. If the cyst is on the anterior wall, a sound may be passed into the bladder; and with the examining finger in the vagina counterpressure is made, and its connection established.

Remember that a cyst located high near the cervix requires a general anesthetic, when the examining finger in the vagina may be met by counterpressure over the abdomen just above the symphysis.

Remember that the cyst is tense, elastic, and is usually circumscribed. Fluctuation can be detected in a large cyst.

Remember that a cystocele is always located anteriorly and increases in size by filling the bladder or in straining and in coughing, and disappears in the recumbent position.

Remember that a rectocele is always located posteriorly, increases in size on coughing, disappears on pressure, and is only in the walls of the vagina and rectum between the examining finger in the vagina and the one in the rectum.

Treatment.—Remember that the treatment is always surgical and consists in removal of the entire sac. This is best accomplished with the patient under a general anesthetic.

CANCER OF THE VAGINA.

Remember that it is rarely primary; it is nearly always secondary to cancer of the cervix. It may be

secondary to cancer of bladder, urethra, vulva, or rectum.

Remember that the cancer spreads rapidly by lymphatics and infiltration of the surrounding tissues.

Remember that hemorrhage and discharge are the characteristic symptoms.

Remember that in the beginning the hemorrhage is slight and may be first noticed after sexual intercourse or defecation, but that the hemorrhage becomes more severe until eventually there is continuous loss of blood.

Remember that the discharge is watery and offensive early, but as ulceration and loss of tissue occur the discharge becomes bloody; pieces of tissue, pus, feces, and urine are found in it, and the odor is fetid.

Remember that pain is not an early symptom and may be absent throughout the course of the disease. When present it is felt in rectum, bladder, pelvis, or along the sciatic nerves.

Remember that the cancerous cachexia, loss of weight, and other constitutional symptoms found in malignancy elsewhere, are present, but occur late in the disease.

Remember that a specimen of the tissues should be sent to a pathologist early in the disease, if there is any question of doubt, for microscopic examination to determine if the growth is malignant, whether carcinoma or sarcoma.

No physician at the present time should delay a diagnosis waiting for clinical symptoms to complete the picture of malignancy, because the hope of the patient rests on a very early diagnosis and the complete eradication of the trouble.

Treatment.—Remember that primary cancer of the vagina is rather rare, and when such a condition is recognized, early and complete extirpation before it has spread to adjacent organs or involved the lymphatics is indicated.

Do not depend entirely upon the clean sweep with the knife around this dangerous growth; use the actual cautery over the edges and base after the growth has been removed. Heat has a retrograde influence upon the cancer cell and is one of the best agents we have at the present time, at least in cancer of the vagina and cervix.

No effort should be made to close or approximate the edges after cauterization unless there is an extensive surface uncovered, when it may become necessary to close the edges, leaving room for drainage between the stitches. This must be watched with the greatest care, and any evidence of return should call for another application of the cautery.

GONORRHEA.

Gonorrheal infection of the female genital organs has reached a stage where it is almost a universal calamity.

It is such a common disease that it is regarded as

a joke by a great many of the laity, because they do not understand its viciousness, and possibly it is not met seriously enough by some physicians.

Remember that men can recover from it, although it often leaves the scars of battle.

But keep keenly in mind that it is rare indeed for a woman to entirely recover from gonorrheal infection, and that a large percentage of the women who come for operations are suffering with pelvic disease of gonorrheal origin.

When we are thoroughly in sympathy with the young woman, with a year or two of married life, who has passed through a period of anguish and pain which she believes is a part of woman's married state and finally submits to an operation, which more than likely renders her unsexed; when we listen to the lamentations of many good women who are childless and who would be willing to risk their lives to become mothers; when we have considered all their suffering, disappointments, and sorrow, we still fail to entirely comprehend the ravages of this disease.

Our experience with this infection in women makes it loom up like a huge mountain, and other vices fade as the valley beside it. The time is at hand when physicians should be compelled by law to report all cases of gonorrhea that come under their treatment to the Boards of Health, and before the case is discharged as cured, the City or County pathologist should have specimens for examination,

and he should give a favorable report before the patient is discharged.

Not until then can we hope to control and prevent the spread of this terrible disease.

Remember that gonorrhea is an inflammation of the genital organs due to the gonococcus infection, and that, as a rule, it first attacks the vaginal mucous membrane—except in children, where it usually begins as a vulvitis—and the exterior mucous membrane of the cervix; it soon extends to the vulva and urethra and may reach the bladder; if not checked, it will extend to the cervical canal, cavity of the uterus, Fallopian tubes, and pelvic peritoneum.

Remember that it is usually communicated from one person to another through sexual intercourse, although it may be communicated through the use of an infected towel or closet seat—such an explanation may be regarded with a little suspicion. We have known it to be transmitted from one woman to another by the promiscuous use of a douche-nozzle.

How children become infected is often a matter of much speculation. No doubt it is most frequently caused by close proximity with adults in sleeping in the same bed, the handling or bathing of genitals by nurse or mother who herself has gonorrhea, and whose fingers are contaminated by the germs.

A little girl, eight years of age, was brought to our clinic by her mother for what proved to be a

gonorrheal vulvitis; when the inflammation began the child complained to her mother that her father (a drunkard) had been playing with her genitals; when he saw the condition of his child he became frightened and ran away; examination of the mother revealed that she also had gonorrhea.

It is well to remember that gonorrhea in children is usually confined to the vulva and urethra; consequently with appropriate treatment a perfect cure may result without deeper involvement.

Symptoms.—Remember that in the newly married woman or girl there will be felt some irritation about the urethra and vulva a few days after intercourse. Urination becomes painful, being attended with smarting and burning. In a few days the vulva becomes bathed with the discharge of pus, which is attended with considerable discomfort and distress in both the vagina and vulva; the vaginal mucous membrane will be found to be swollen and rather tender, and communicating to the examining finger a feeling of heat and roughness; if the urethra is pressed upon through the anterior vaginal wall, pus will often exude from the external meatus.

Remember that gonorrheal pus has a yellowish color during the acute stage and that the clothing will bear the yellowish stain; in chronic gonorrhea this is not always the case.

Remember that in the acute stage there will be a frequent desire to urinate and that urination will be

accompanied by pain and smarting, the discharge will be profuse, the external genitals will be red and swollen.

Diagnosis.—Now keep in mind that gonorrhea in woman is one of the most serious infections that she may have and that a correct diagnosis is necessary, so that proper treatment may be instituted for a cure and to prevent complications if possible.

Remember that vulvitis and vaginitis from any other infection, except gonorrheal, are seldom so acute right from the onset. It reaches its height in a week or ten days, and then, as a rule, begins to subside; the urethra is always involved, and it has been claimed that infection of the vulvovaginal glands makes the diagnosis of gonorrhea almost certain.

However, remember that inflammation of the vulvovaginal glands may take place from other infections.

Remember that in vaginitis from any other cause there is in all probability a history of some infection or opportunity for infection: e. g., abortion, labor, or instrumental manipulation.

Do not be deceived into thinking that because the inflammation is not severe that it may not be gonorrheal.

Remember that gonorrheal attacks vary in severity; in the young woman it may be severe; in the woman who has borne children and who has been subject to other onslaughts there is a more tolerant

mucous membrane. This is especially true where there has been a previous gonorrhea.

Remember that if there is the least room for doubt that the discharge should be submitted to a pathologist for examination.

Remember that in a chronic case the gonococci may not be found in the first microscopic examination; the pus may not have been taken from the right place, and if there is clinical evidence of the disease it should be tried again. Pus pressed from the urethra or taken from the upper part of the vagina or cervix is likely to demonstrate the gonococci.

Remember that there are diplococci that take the same stain as the gonococci, and yet this patient has never had any of the clinical symptoms of acute gonorrhea; this would prove very embarrassing and emphasizes the necessity of employing an expert pathologist, who is thoroughly familiar with these conditions. Such difficulties could only obtain, however, in chronic cases, where for some reason or another a definite history of an acute attack could not be obtained.

Treatment.—Keep in mind that in a known case of gonorrhea our ultimate desire should be a complete cure without extension of the infection to the uterus, Fallopian tubes, pelvic peritoneum, and ovaries.

Therefore, it is well to keep in mind that, if the inflammation fortunately seems to involve only the vulva, the vagina should not be tampered with, and

if the vagina is the seat of inflammation, not to meddle with the interior of the cervical canal, lest the infection, which by natural selection has a tendency to penetrate deeper, is forced into the cervix against the natural defense.

Remember that the cervix furnishes a considerable amount of resistance against the entrance of infection. The canal is usually contracted, irregular on its surface, and closed by a plug of mucus. The more patulous the cervix, the more readily infection may enter; hence after parturition, abortion, or just following the menstrual period are favorable times for extension.

Remember that in the girl or young woman whose hymen is not ruptured it is possible to keep the infection confined to the vulva and effect a cure without further extension.

Do not advise vaginal douches in these cases.

The doctor himself should, if possible, see and treat these cases daily; the vulva should be thoroughly cleansed (a 1:5000 bichlorid solution may be used) with plain warm water. After which an application of some of the various gonococcicides may be used. Argyrol in a 10 to 25 per cent solution does well in some; this is particularly useful in the urinary meatus after the pus has been thoroughly cleaned out; avoid the meatus, however, during the acute stage.

Protargol 4 or 5 per cent and silver nitrate 2 to 4 per cent have given us the best results, and unless

used strong enough to burn have no objectionable features. If the patient is a child, instruct mother or nurse, or if a grown woman teach her the necessity of constantly wearing a sanitary gauze pad held with a T-bandage. This should be changed as often as it becomes soiled. The patient should have a dusting powder for this pad, of zinc stearate, boracic acid, or borated talcum powder, which keeps the parts moderately dry, and prevents irritation.

Do not let the patient come to your office during the acute period if it is possible for her to stay at home.

Remember that rest in bed at this time is a very important part of the treatment. Walking causes friction and more irritation of the inflamed parts.

If the discharge is copious the patient may bathe herself two or three times daily with a weak, warm solution of bichlorid.

If there is urethral inflammation with a frequent desire to urinate, urotropin, santal oil, or oil of wintergreen may be used to advantage. We have found the following prescription useful:

℞ Tincturæ belladonnæ ..... 3 j
Sodii benzoatis ..... 3 j
Olei gaultheriæ (true) ..... 3 iss
Fluidextracti tritici ..... 3 iv
Elixiris aromatici ..... q. s. ad ℥ iv
Misce.
Sig.: Shake. Teaspoonful in water every 2, 3, or 4 hours.

Remember if the vagina is infected that practically the same treatment may be followed, except

that, in connection with the external douching, a vaginal douche should be taken every four to six hours during the acute period. Be careful in advising bichlorid douches, lest they may be used too strong.

Remember that it is safer to have a bichlorid solution made up for the patient, with directions to use a teaspoonful to two quarts of warm water, than to trust her with bichlorid tablets.

Do not advise bichlorid douches taken several times daily. Once daily of a weak solution is enough. The other douches might be made with ʒ j of zinc sulphate to two quarts of water. Boracic acid ʒ j to two quarts of water, or saline solution, may be sufficient for cleansing purposes, with the one douche daily of the bichlorid solution.

Remember that as the symptoms begin to subside the treatment should be less vigorous.

Do not fail to emphasize at any time the danger of carrying the infection to others and the very great danger of eye infection.

After three or four weeks of treatment the patient may be apparently well. Do not, however, discharge her as well without making several microscopic examinations of the secretions. Even if these examinations are negative, the patient should be kept under observation for several weeks or months for the appearance of unfavorable symptoms.

Remember that the day of serum and vaccine

therapy is here, and here to stay. It can do no harm to administer four or five doses of Neisser vaccine five or six days apart to this patient as a finale of the treatment, and it may save her from lapsing into the chronic stage with sad complications. It has proved quite effectual in our hands, just at the decline from the acute stage, as well as in chronic gonorrhea.

Remember that even after the discharge has ceased it is quite a safeguard to paint around and over the cervix with tincture of iodin. This should be done three or four times, about a week apart.

Treatment of Chronic Gonorrhea.—It is such a well-known fact that gonorrheal infection persists indefinitely, that a physician should not dare dismiss his case as cured until careful and repeated microscopic examinations fail to reveal the micro-organisms; the infection may be found in the urethra, the vulva, vaginal ducts and glands, Skene's ducts, in the mucous membrane folds in the vagina, in the cervical canal, or in the uterus and Fallopian tubes.

This patient should call at her physician's office two or three times a week. The urethra, glands, ducts, mucous membrane folds, and cervix should be thoroughly inspected and cleansed; a thorough application of 25 per cent solution of argyrol should be made, and a tampon of ichthyol, 10 per cent, with glycerin, inserted. Some prefer iodin 5 per cent and glycerin.

Remember that especial care must be given to the

ducts of the vulvovaginal glands and Skene's ducts; an effort must be made to penetrate them with the gonococcicide used. If the vulvovaginal glands suppurate, they have to be enucleated, or incised, and the walls curetted away, after which the cavity is packed with gauze and allowed to heal by granulation. A general anesthetic is required.

Remember that if the wall of the gland is not thoroughly removed a suppurating sinus may remain, requiring a subsequent operation. A thorough application of equal parts of carbolic acid and tincture of iodin to the cavity after curettage is splendid treatment. The packing should be removed every other day, and new packing replaced. An occasional stimulating application of tincture of iodin to the closing cavity is good practice.

Let it be emphasized that, during this treatment, the gonorrheal vaccine should be administered every five to seven days.

Now, if the uterine discharge persists, and if upon careful bimanual examination no tubal involvement is found, something must be done to facilitate cervical and uterine drainage, and save if possible the extension to the Fallopian tubes and peritoneum.

Keep in mind that in such a case, if it cannot be cured, it will extend sooner or later.

Under an anesthetic, the cervix should be well dilated, and the cavity of the uterus thoroughly cleansed by careful curettage, after which the whole surface should receive an application of equal parts

of carbolic acid and tincture of iodin. A tape of iodoform is passed into the uterus to favor drainage and to prevent a too rapid contraction of the cervix. This is removed in two or three days. The treatment should be followed by hot douches to prevent an acute inflammation.

CHAPTER IV.

DISEASES OF THE UTERUS.

POSTERIOR DISPLACEMENT.

Remember that the uterus lies between the bladder and rectum above the vagina and below the abdominal cavity.

Remember that the long axis of the uterus forms a right angle with the long axis of the vagina.

Remember that, normally, the uterus is slightly anteflexed, with the concavity forward. The anterior surface rests upon the bladder, while the cervix points backward toward the coccyx.

Remember that, normally, the uterus is freely movable; that a full bladder pushes it backward, or forward by a full rectum; that it moves up and down with respiration.

Remember that the pressure from above, normally, is exerted on the fundus and the posterior portion of the uterus.

Remember that, normally, the abdominal viscera exert their pressure upon the posterior surface, thus forcing the uterus forward upon the bladder.

Remember that the question of displacement often becomes important in medicolegal affairs, because of

claims that a fall or jar causes a sudden and permanent backward displacement; but it is extremely doubtful if displacement is ever caused in this manner, and probably the patient had the displacement but did not become aware of it until after receiving an injury.

Remember that a displaced uterus will interfere with the venous blood flow, causing passive congestion of the organ and adnexa. This in turn produces varicosities of the blood-vessels of the broad ligaments, and causes degeneration processes to occur in the ovary and tubes.

Remember that menstruation will be profuse, due to the congested condition, but not all patients suffer pain.

Remember that backache in the sacral region, leucorrhea, constipation, headache, and often bladder irritation complete the category.

Remember that a uterine fibroid in the posterior wall is more nearly round in shape and harder in consistency than a displaced uterine fundus.

Remember that, as a rule, the cervix is displaced forward, striking the anterior vaginal wall, and it is on a line parallel with the vagina and lower down than normally.

Remember that during the puerperium, when the uterus is large and soft, the ligaments are relaxed, and the patient is lying on her back, all the conditions favoring retroversion are present.

Remember that subinvolution, following labor or

miscarriage, is a very frequent cause of displacement.

Remember that tight abdominal binders, or strictly confining the patient to the dorsal position, will often cause a retroversion.

Remember that nervous symptoms frequently occur, and neurasthenia is the most common. There is a tired feeling and an utter lack of desire to exert oneself.

Remember that sterility is common in retrodisplacement, due to the complicating endometritis and the malposition of the cervix, thus interfering with the entrance of the spermatozoa.

Remember that it is only by a physical examination that a diagnosis can be made. In making a bimanual examination, the position of the cervix will be an indication of the position of the uterine body. If the cervix lies in its normal position, pointing downward and backward toward the second sacral vertebra, the body of the uterus is likely to be in its normal position or anteflexed.

Remember that no clinical syndrome will enable you to make a diagnosis, because of the great variations in intensity and character, and it is only by a physical examination that the condition may be diagnosed.

Remember that a physical examination is made with the patient in the dorsal position, the index finger of the left hand being introduced into the vagina. The position of the cervix is first de-

termined, whether lower in the vagina than normal, and pointing forward instead of backward toward the coccyx.

The next step is the locating of the fundus. Normally it is found anteriorly, and it should be sought for in this locality. Push the index finger into the anterior cul-de-sac of the vagina, and at the same time make counterpressure on the abdominal wall immediately above the symphysis pubis with the fingers of the free hand. The fundus can be easily felt between the fingers of the two hands, if it is in its normal position.

If the uterus be not found anteriorly, it should be sought for posteriorly by carrying the internal finger up into the posterior cul-de-sac; at the same time counterpressure is made upon the abdominal wall by pushing the structures down along the curve of the sacrum by the fingers of the external hand. The fundus may thus be caught between the fingers of the two hands and recognized by its outline. With continued counterpressure with the external hand the tip of the internal finger is passed slowly over the posterior surface of the uterus from the fundus to the cervix. If the cervix and the fundus lie in a straight line, then the uterus is retroverted; but should the line be convex, then it is a retroflexed uterus.

Remember that in a retroflexion the cervical canal may point in the normal direction but the fundus is bent backward so that the fundus and the cervix are

connected by a curved line whose concavity points downward.

Remember that a retrodisplacement must be differentiated from a fibroid on the posterior uterine wall. This is readily done by locating the fundus anteriorly and the cervix, normal in position in case of fibroid.

Remember that a tubo-ovarian mass lying behind the uterus is differentiated by the clinical history and by passing the uterine sound and demonstrating the position of the uterus with reference to the mass.

Remember that the determination of the location of the uterine fundus is always the most important differential point in diagnosticating uterine displacements.

Treatment.—Remember that the length of time displacement has existed is of great importance, because in a displacement existing for one year or more the tissue changes in the uterine support are permanent and palliative treatment will accomplish nothing.

Remember that in treating recent cases the following must be considered:

1. Removal of the cause.
2. Replacement of the uterus.
3. Retaining the uterus in normal position.
4. Reduction of the size of the uterus and stimulation of its ligaments.
5. Regulation of hygiene and general treatment.

Remember that the removal of the cause fre-

quently consists of repair of tears in either pelvic floor, or cervix. In cases of chronic endometritis the uterus should be curetted.

Remember that there are two methods by which the uterus may be replaced. They are the bimanual method of replacement and replacement by the knee-chest position.

Remember that the bimanual method of replacement is very difficult in fat or muscular women.

Remember that the bladder and rectum must be emptied before attempting the bimanual method of replacement.

Remember that the following is the technic for the bimanual method:

1. The clothing is loosened, and the patient is put in the dorsal position.

2. The index and the middle fingers of the left hand are introduced into the vagina into the posterior cul-de-sac, and the fundus of the uterus is pushed upward to the promontory of the sacrum.

3. When the fundus is on a level with the promontory, the fingers of the right hand push the abdominal wall behind the uterus, thus holding the uterus while the internal fingers are placed against the anterior lip of the cervix and push it upward and backward.

4. While the cervix is pushed upward and backward, the external hand pulls the uterine fundus forward into position.

Replacement by the knee-chest position is usually

the best method, because when the vagina walls are separated air rushes in and balloons out the vagina, which causes the uterus to gravitate to its normal position.

Remember that the bladder and rectum should be empty and the clothing loosened.

The patient is placed in the knee-chest position, a speculum introduced into the vagina, and the perineum well retracted, when the uterus will drop forward into the normal position. Should the uterus not fall forward at once, the anterior lip of the cervix should be caught with a forceps and pulled forward so that the uterus will swing clear of the sacral promontory.

Remember that any or all these methods will be ineffectual if the uterus is bound down by adhesions; sometimes the uterus itself may be free from adhesions and can be more or less perfectly brought forward to its normal anteflexed position, but owing to prolapsed tubes or ovaries, bound down by inflammatory adhesions, the uterus will drop back to the posterior cul-de-sac soon after being released by the hands, or when the patient changes her position from the knee-chest to the dorsal or upright.

A ball of absorbent cotton held in grasp of dressing forceps may be passed into the posterior fornix and against the posterior uterine wall, and pressed upward while the cervix is pulled down toward the vaginal outlet.

Remember that the uterus, after being replaced, must be held in position for a variable time, and this is accomplished by the use of the pessary.

Remember that a pessary must fit properly or it will be harmful. For instance, if it holds the uterus above or below its normal level, it obstructs the circulation and causes pelvic congestion. This trouble may be overcome by changing the length and angle of the posterior curve. A long, sharp curve holds the uterus higher than a short and less acute. Or, as the pessary is supported in front by the pubic rami, if the anterior curve is such that the pressure falls upon the neck of the bladder or the urethra, it must be changed.

Remember that a properly fitting pessary causes no pain and does not interfere with sexual intercourse.

Don't neglect a warm soapsuds douche weekly, but never use salt solution, as it causes incrustations to form on the pessary and by irritation of the parts causes inflammation. Don't neglect a weekly examination in case of pregnancy, and at the beginning of the fourth month the pessary should be removed.

Don't neglect to examine the patient in the erect position after introducing a pessary, to determine whether or not it fits properly. The examiner's fingers should pass between the vagina and the pessary at all points, the posterior cul-de-sac should be

taut, and the respiratory movement of the uterus should be felt.

Remember that the method of introducing the pessary is as follows: The patient is placed in the dorsal position; with the thumb and index finger of the left hand separate the labia; the pessary is held by the anterior bar between the thumb and index finger of the right hand, and the posterior bar is inserted in the transverse diameter of the vagina; push the pessary downward and backward along the pelvic curve until the posterior bar lies close against the anterior cervical lip. Now introduce the index finger of the left hand into the vagina below the anterior bar of the pessary until it presses against the posterior bar. The posterior bar is then pushed downward and backward until it is pressed behind the cervix.

Remember that a routine course of treatment should be followed to cure the subinvolution of the pelvic organs. This is best carried out by the use of a vaginal douche of hot water and the introduction every other day of a tampon of cotton-wool saturated with a 25 per cent solution of ichthyol in glycerin.

A good general tonic should be administered, and the clothing kept loose. The patient should take light outdoor exercise.

The following is probably the best depletory that can be applied to the vaginal vault. It causes no pain and is antiseptic. It is made as follows:

℞ Glycerini .....3 viij
Magnesii sulphatis .....3 v
Phenolis .....3 ss
Misce.
Heat till all is dissolved forming a clear solution. No water is to be used.

To this ichthyol or, in case an astringent is needed, zinc sulphate may be added. Gauze, or better, wool, saturated with the above and used as a tampon, will give perfect satisfaction as a depletory.

Remember that in chronic cases of long-standing or in cases where adhesions have formed it will be absolutely necessary to adopt surgical methods at the beginning.

Remember that the replacement and retention of the uterus and adnexa by surgical procedure depend upon the shortening of the natural ligamentous supports, and should leave the parts as nearly normal as possible.

Remember that adhesive bands do not make good supporting structures, because they are elastic, usually not sufficient in extent, and they form excellent means for the looping of the intestines and causing obstruction of the bowel.

Remember that, if possible, the causes must be removed before a radical operation is performed; thus, a torn cervix or tears of the perineum or pelvic floor must be repaired, and the uterus curetted should endometritis be present. The repair of lacerations and the curettement should be done before

the abdomen is opened, but all may be accomplished with one anesthetic.

Remember that the operation will probably be the best that utilizes the proximal part of the ligaments for support because of its greater strength.

Remember that, whatever be the operation selected, it should pull the uterus forward and upward and hold it firmly in position, and at the same time be capable of allowing for the increase in size during pregnancy.

PROLAPSE OF THE UTERUS.

Remember that "procidentia uteri" or prolapse of the uterus is a condition in which the uterus is found below the normal level in the pelvis. It is frequently spoken of by the laity as "falling of the womb."

Remember that this condition is the first step that occurs in retrodisplacements; hence the same causes are found in both.

Remember that the extent of the prolapse determines the symptoms. The clinical manifestation includes the following symptoms: Backache, felt usually in the lumbosacral region and made worse by standing or walking, but usually relieved on lying down. The pain is dragging or bearing-down in character and may radiate down the thighs.

Remember that the bladder always accompanies the uterine descent, because of its firm attachment to the cervix. This makes it impossible for the blad-

der to completely empty itself, and the residual urine undergoes decomposition, producing cystitis.

Remember that as the uterus descends it drags down the anterior rectal wall, producing a rectocele, and this gives rise to the rectal symptoms of difficult defecation, chronic constipation, and hemorrhoids.

Remember that the patient usually says that the womb is low, or drops completely outside, and upon examination, the vaginal opening and all the uterine supports are greatly relaxed—the uterus can easily be pushed out with the examining hands. The patient herself can force it well out by straining.

Remember that all women regard the upright position for examination as vulgar and extremely embarrassing, and should not be practiced, unless it is necessary.

Remember that the index finger of the left hand should be introduced into the vagina, and the position of the cervix determined. If found low and pointing forward in the direction of the long axis of the vagina, it may prove to be a prolapse of the first degree. The tip of the left finger should now be placed against the cervix to steady it, and with the right-hand palpation of the lower abdomen the position of the fundus will be found to be lower in the pelvis than normal, and retrodisplaced. Remember that in inversion of the uterus there is a distinct ring completely around the protruding mass formed by the cervix, while the opening into the cervix cannot be demonstrated.

Remember that in prolapse, unless complete, the fundus uteri can be located by bimanual examination and the opening of the cervical canal can be easily seen.

Remember that in cervical polypus the uterus is found in its normal position, and a sound may be passed into the uterine cavity.

Remember that all cases of prolapse should be examined bimanually, because the uterus may be forced out of the pelvis by a tumor or by ascites.

Treatment.—Remember the first step in the treatment is a reduction of the prolapse: the uterus should be grasped between the thumb and fingers, and steady pressure is made in the axis of the vaginal canal. When the uterus returns to the normal position, the patient should then be placed in the knee-chest posture, a Sims' speculum introduced, and the vagina packed with a wool tampon saturated with boroglycerid. This is allowed to remain in place for forty-eight hours, and the patient should remain in bed three or four days in order that the congestion and edema of the uterus may be relieved.

When the edema is pronounced it may be impossible to return the uterus. The foot of the bed should be elevated, and glycerin and ice-water compresses applied to the uterus; should this fail, then multiple incisions of the cervix should be made.

Remember that the application of vaselin to the vaginal walls before attempting replacement of the uterus by taxis is of advantage.

Remember that after the reduction of the prolapse the subsequent treatment may be either radical or the use of mechanical support. Of the latter, the best is probably a moderate-sized globe pessary, or a Goddard pessary.

Remember that a pessary should be removed at night during the recumbent posture; should be thoroughly washed with soap and water and dried before replacing; and a vaginal douche of hot normal salt solution should be taken.

The pessary should be thoroughly smeared with an ointment of zinc oxid before replacing to prevent excoriation.

Remember that the following considerations should govern the choice of operation in attempting a radical cure:

1. A prolapse in a multiparous woman cannot be cured by a plastic operation alone, but uterine suspension in addition is necessary.

2. A woman of child-bearing period living with her husband should not be subjected to an operation that produces extreme narrowing of the vagina, and the uterine suspension should be added to the plastic operations.

3. In a woman past the menopause exaggerated narrowing of the vagina may suffice, provided that the prolapse is not too great.

Remember that there are two classes of operation: those that preserve all the genital function, and those that do not.

Under the first class there are two methods tending to correct the pathological condition:

1. The fastening of the fundus uteri forward and upward by one of the various methods of shortening the round ligaments, and the integrity of the pelvic floor restored by surgical procedure.

2. Raising the uterus high and suturing the fundus directly into the abdominal wall, with restoration of pelvic floor.

Under the second group come the hysterectomy and the high fixation of the cervical stump.

INVERSION OF THE UTERUS.

Remember that the uterus may be partially or completely turned inside out.

Remember that the cervix is dilated by the inversion and forms a callus around the inverted body, and by the contraction of the circular muscular fibers interferes with the replacement of the inverted body.

Remember that the condition occurs in labor during or after the third stage, or is caused by the weight of a polypoid tumor growing from the fundus.

Remember that traction on the cord in attempting to bring away the placenta during labor is very likely to result in inversion.

Remember that the symptoms depend upon the rapidity of the inversion, and those cases occurring during labor usually occur rapidly. The patient

complains of severe pelvic pain, followed quickly by profuse hemorrhage and shock.

Remember that when the condition occurs in the non-gravid uterus the displacement develops slowly and has somewhat a chronic course. There will be hemorrhage, continuous with the daily loss of a small quantity of blood, and this eventually produces marked anemia and general debility. There will also be leucorrhea, often purulent and offensive, suggesting malignancy.

Remember that these patients complain of dragging pain in the pelvis with pressure upon the rectum and bladder.

Remember that a physical examination reveals a pear-shaped tumor, soft, and constricted above by a rim or callus—this is the cervix uteri.

The surface of the tumor is vascular, and the placenta may or may not be attached.

Remember that rectal touch, combined with pressure upon the abdominal wall above the pubis, reveals the absence of the uterus.

Treatment.—Remember that the uterus should be replaced at once in acute cases. The patient is anesthetized, placed in the dorsal position, and the reduction made by the hand.

Remember that instrumental replacement is not indicated in acute cases.

Remember that the technic of the procedure is as follows: Form a cone with the fingers of the left hand, introduced into the vagina and pressed against

the inverted fundus, while the fingers of the other hand make a counterpressure from above through the abdominal wall upon the cervical callus. If the manipulations are successful, the fundus passes slowly back through the cervical rim.

After the replacement is accomplished, the left hand is kept in the uterine cavity until a douche of two gallons of hot saline solution is given to stimulate contraction.

Should rapid reduction fail, then the slow method of vaginal tamponing must be resorted to. The patient must be kept in bed, and every other day the vagina is thoroughly packed with gauze; or a gradual reduction may be accomplished by the use of Braun's colpeurynter, using either air or water to distend the rubber bag.

Remember that if all efforts fail to reduce the uterus the posterior lip of the cervix may be split. This operation relieves the constriction and gives more space to restore the displaced organ. After replacement the incision should be closed by interrupted sutures.

When reduction by any method is impossible, amputation of the uterus should be done. This is best accomplished as follows:

1. Seize the inverted fundus with a pair of forceps and make strong traction.

2. The cervix is now grasped by four forceps and pulled down into the vulvar opening.

3. The fundus is caught by an additional pair of

forceps and incised antero-posteriorly in the median line. The fingers should be introduced through the opening to determine if the cavity contains loops of intestines. The uterus is now divided into two lateral halves by carrying the antero-posterior incision down to the internal os.

4. A Hagedorn needle, threaded with No. 3 catgut, is passed through the uterine tissue at the internal os under each broad ligament and tube, and securely tied. These ligatures prevent retraction of the divided ligaments and hemorrhage.

5. Three sutures are now passed transversely through the body of the uterus about a quarter of an inch from the internal os.

6. The uterine halves are amputated just below the three transverse ligatures, and they are securely tied.

FIBROMATA.

While uterine fibroids are classified histologically, according to their predominant tissue, into fibroma, myoma, fibromyoma, and myoma fibroma, yet, from a clinical standpoint, this classification is quite unnecessary. Nothing is known of their origin, though they are quite common.

Remember that they occur most frequently during the child-bearing period of a woman's life. They are usually found in women who are sterile, or who have borne but one child. Many of these women are sterile by virtue of the presence of the fibroid, which

not only destroys the uterus, but cripples and occludes the Fallopian tubes as well. But it does seem that Nature has intended that the uterus should perform a given amount of work. May it not be possible that during this wonderful process of fecundation and gestation that a certain amount of something (say energy) is expended, which, when Nature is cheated in her process, is utilized or expended in the formation of these new growths?

Remember that the portion of the uterus above the internal os is the part principally concerned in gestation. While fibroids may be found in the cervix, yet they are more frequently found above the internal os.

Keep in mind that fibroids are benign, though they may undergo various secondary changes.

Remember that they may atrophy at the menopause, or become calcified from the deposit of lime salts. Dilatation of the lymph-spaces and cyst formations may take place.

Remember that submucous fibroids may become pedunculated and form what are known as uterine polypi; this variety may become infected, and suppuration takes place. Remember also that malignant changes occur in the fibroid, and we have carcinomatous and sarcomatous degeneration.

Remember that all fibroids are not large, and that they vary in size from a small shot to enormous tumors weighing several pounds.

Remember that they may occur singly, but that they are usually multiple.

Remember that fibroids cause a general muscular hypertrophy of the walls of the uterus, and this increased weight causes uterine displacement.

Remember that large abdominal fibroids may cause cardiac hypertrophy of the left side, and eventually fatty degeneration. The liver may also undergo fatty degeneration.

Remember, too, that uterine fibroids may undergo various degenerative changes.

Remember that hemorrhage is a very common symptom and should always arouse suspicion. Usually there is an increase in the amount and duration of the menstrual flow.

Remember that the character and location of the tumor will determine the amount and duration of the bleeding. A polypus generally causes constant bleeding, as well as an increase of the menstrual flow. Submucous and interstitial fibroids are usually accompanied by menorrhagia; the subserous and intraligamentous fibroids have little if any influence upon menstruation.

Clinically we speak of them as subserous, interstitial, submucous, and intraligamentous. Frequently we have all varieties in the same case.

Remember that the subserous fibroids are under the peritoneum covering the uterus and are found from the size of a small shot to that of an enormous

growth; they have various shapes and occur from a single tumor to a multiplicity in numbers. The fundus may attain the size of a three or four months' pregnant uterus, entirely free from adhesions, with the whole surface of the fundus or tumor perfectly smooth, and without the history, one might have considerable difficulty in making a diagnosis, which would be in favor of pregnancy.

Remember, however, that, as a rule, these women menstruate regularly, and quite profusely, although this is not invariably the case. They have no other evidences of pregnancy except the symmetrical enlargement of the uterus. If more convincing proof is necessary, then you will be able to ascertain from the history or a careful examination. A uterine sound may be used.

Remember, too, that in a case of interstitial fibroids of the uterus the early symptoms are rarely so severe that one cannot well afford to wait a few months if there is any question in the diagnosis.

Remember that there is little, if anything, to suggest the development of uterine fibroids early in their growth. There may be a slight hyperemia or congestion of the pelvic organs, enough perhaps to produce increased menstrual flow (menorrhagia).

Remember, too, that there may or may not be sterility. Women, as a rule, do not call upon the physician for examination and advice concerning their pelvic organs until they are forced to do so for relief of their pain.

Remember that there is no pain in the fibroid itself, hence there is no pain until the tumors are large enough to produce pressure symptoms.

Remember that these pressure and irritating symptoms are usually found in the bladder, rectum, intestines, and peritoneum.

Remember that constant pressure and friction against a peritoneal surface produce a local peritonitis, followed by adhesions.

Remember that the pain increases in proportion to the size and amount of impaction of the tumor within the pelvis.

Keep in mind, if there is associated an intraligamentous fibroid, or one low down anteriorly or posteriorly, preventing the uterus from rising out of the pelvis into the abdominal cavity, that the tumor may fill the pelvis so that the tumor may be felt bulging into the vagina.

Keep in mind that in such a case the bladder will be displaced, or squeezed against the pubis. There will be severe pressure against the rectum favoring constipation, and often making defecation difficult.

Remember also that the Fallopian tubes may be displaced, and crippled, rendering the patient sterile. The ovaries are also displaced, and by continuous hyperemia and by pressure they finally become cystic.

Keep in mind that there may be sufficient pressure against one or both ureters to cause obstruction, producing more or less marked hydronephrosis.

Remember that these exaggerated cases rarely give any trouble, so far as making a diagnosis is concerned; but remember also that should there be only one subserous tumor that does not attain a very great size, say no larger than a hen's egg, and if that should be located posteriorly or laterally, and if the patient is a fleshy woman, positive diagnosis may be quite difficult, sometimes impossible.

Remember that in such a case we shall have to differentiate between a displacement of the uterine fundus, cyst, or solid tumor of the ovary, or a broad ligament tumor.

Remember that it is quite possible, in fact it is not uncommon, for pregnancy to coexist with uterine fibroma.

Remember that we may be ignorant of the fact that there is a coexisting pregnancy at all and at the time of operation discover it. Or we may have positive knowledge of a coexisting pregnancy with rapidly developing uterine fibroid, due to the increased blood supply during the pregnant state.

Remember that in the latter case we have a grave question to decide: one that deserves our most careful and honest consideration, because there are now two lives that are at stake, and all depends on our advice.

Remember that she has sought relief for the rapidly developing tumors which are now producing serious pressure symptoms, or reflex disturbances.

Keep in mind that she may have been married for

a long time and that this is her first pregnancy, and that she is anxious for an heir.

Remember that as gestation advances the fibroids increase greatly in size, and after a while it becomes evident that delivery by the natural route is going to be extremely difficult and perhaps impossible. The pain and gastric disturbances are becoming almost unbearable, and in all probability, she cannot tolerate her distress until full term.

Remember that you have here to consider the welfare of both the child and the mother, and undoubtedly the mother's chances for recovery should be considered first.

Remember that, where it is possible to treat symptomatically and carry a patient like this along until the sixth or seventh month, or later if possible, then performing a quick supravaginal hysterectomy, having an incubator handy in which to place the child, the chances may be very good for both mother and child.

Remember that, even as early as the fifth month, a supravaginal hysterectomy has been done and the tumor laid aside for several minutes, after which the uterus was opened and a live fetus found, which was resuscitated, and lived for several hours, even without the use of the incubator. If proper arrangements had been made for an incubator, no doubt this child could have been saved; at least if a rapid Cesarian section had been performed and followed by a supravaginal hysterectomy.

Remember that one of the greatest reasons for mortality in Cesarian section is that the case has usually been in labor forty-eight hours or more with forceps applied, with considerable local damage to the uterus, and with an exhausted patient. This patient would have little show for life in any operation.

Remember, then, that there are no well-defined early symptoms of uterine fibroid except in the submucous variety, where there may be a menorrhagia, and later a metrorrhagia.

Keep in mind that, as these tumors develop, congestion of the pelvic organs increases.

Remember that the menopause does not always bring relief from atrophy, as we would hope.

Remember also that very frequently in these cases the menopause is indefinitely delayed, the flow is constant (metrorrhagia), and accompanied with much pain (dysmenorrhea).

Remember that the patients are usually sterile, and if they become pregnant, they frequently abort.

Remember that if congestion and engorgement continue the fibroids develop rapidly, and we must anticipate trouble.

Keep in mind the close proximity of the bladder, urethra, ureters, pelvic vessels, and nerves, and the effect of direct pressure which is responsible for numerous complications.

Keep in mind that anterior and posterior displace-

ments of the fundus must not be mistaken for a fibroid in the anterior or posterior uterine wall.

Remember that fibroids usually occur in numbers, and that they are irregular in size, and usually are harder than the fundus of the uterus.

Remember that, if it is necessary (in order to make a positive diagnosis), a uterine sound may be used (under perfectly aseptic precautions).

Remember that ovarian cysts are softer, usually located laterally or posteriorly, and not always connected with the uterus.

Remember that in normal pregnancy there is amenorrhea with other signs of pregnancy.

Remember, also, that, if the doubt is sufficient, a few months of waiting will clear up the doubt.

Remember that in ectopic gestation there is also a cessation of the menstruation with other signs of pregnancy. The tumor is located laterally, is soft, and slightly contractible to the touch. The fundus and cervix are enlarged and soft, with occasional sharp shooting pains; and lastly, there will be severe pains, symptoms of hemorrhage, shock, and the throwing off of the decidua.

Remember that where there are inflammatory deposits in the pelvis our patient will have a history of some infection with sudden acute pain, and febrile symptoms.

Remember that, in such a case, a soft and tender enlargement will usually be found in the pelvis, and

there will be exacerbations of acute symptoms of infection occurring at frequent intervals.

Treatment.—Remember that, if the fibroids are quite small, and produce no symptoms, and especially if near the menopause, they should be let alone.

Remember that in a woman, near full-term pregnancy, or perhaps during delivery, a fibroid as large as a walnut may be felt on the fundus of the uterus. This should not necessitate operative interference, as in all probability this tumor will disappear as the uterus undergoes involution.

Do not undertake palliative treatment by local medication with any hope to yourself or to the patient that you will effect a cure in fibroids that are producing symptoms of any character.

Remember that, if you do, you will fail, and your patient as well as yourself will be greatly disappointed.

Keep in mind that local treatment is only of benefit for cleansing purposes, and the temporary control of hemorrhage.

Remember that the removal of the polypus presenting through the cervix gives temporary relief from pain and hemorrhage. Do not promise permanent relief from this, if the fundus is also nodular.

Remember that curettage is not curative, and is sometimes followed by sloughing of the fibroid tumor, which gives us dangerous complications to deal with.

Remember that myomectomy may be safely done where the fibroids are purely subserous, and in many of these, operation is not necessary.

Remember that where there is a mixture of tumors, which is so often the case (some deep-seated intramural), and when these are shelled out, it necessarily leaves a much-weakened wall of the uterus at that point which is in danger, should pregnancy subsequently occur.

Remember that there is one very important thing for us to consider, and which will become very plain to us after incising a uterus that has been removed for fibroids: that is, the great possibility of overlooking some of the new and smaller fibroids within the uterine wall, which means further trouble, and perhaps another operation for our patient.

Remember, however, that the plan of treatment may be greatly modified by the age and wishes of the patient.

Remember and always discuss with the patient, and her husband, the possibility and advisability of child-bearing, if she is in the child-bearing period of life.

Keep in mind that if the fibroids are numerous and large, and we have reason to believe that the function of the uterus is beyond hope, myomectomy is entirely out of the question, and hysterectomy should be done.

Remember that, when it comes to a matter of hysterectomy for the cure of uterine fibroids, the ab-

dominal route is by far the best and safest, and can be done in less time. The argument that the vaginal route is safer will not hold good.

Remember that, if the tumors are of any considerable size, the vaginal route is entirely out of the question. An operator of skill can do an abdominal operation in less time, complete the work to his entire satisfaction, with much less fear of hemorrhage following, and his patient's convalescence will be just as short.

If the cervix is large and hard, a complete (panhysterectomy) hysterectomy should be done. Many of these patients remain semi-invalids, after a supravaginal hysterectomy, owing to the fact that they have a large, heavy cervix remaining, which will not atrophy. They have a constant, copious leucorrhea, and often bloody discharges almost equal to a menstruation.

Remember that, whether the cervix is removed or not, the vagina may and should be raised, by fixing the stumps of the broad ligaments at this point, after which the *whole* is covered entirely by peritoneum. This raises the vagina, keeping the anterior and posterior walls of the vagina from sagging, and adds materially to the success of the operation, and to the future comfort of the patient, the end desired by both the patient and the surgeon.

Remember that delay is dangerous. Early operation, under proper conditions, means small risk to the patient, while late operation means great risk.

CANCER OF THE UTERUS.

Remember that carcinoma of the body of the uterus is less frequent than cancer of the cervix and occurs later in life.

Remember that cancer of the body progresses much slower than that of the cervix; hence requires a longer time before the affection becomes inoperable.

Remember that cervical lacerations lay the foundation for cervical cancer.

Remember that carcinoma of the cervix may be overlooked in its beginning, because the cervical wall around the external os may be only slightly thickened on the affected side.

Remember that extreme friability and persistent bleeding on slight abrasion are strong diagnostic signs, and microscopic examination of an excised piece will positively identify cervical cancer.

Remember that carcinoma of the cervix usually starts near the os externum, where the cylindrical and pavement epitheliums meet. The margin of the ulcer is irregular, hard, and usually raised. The base is irregular and bleeds easily.

Remember that age is an important factor and carcinoma uteri is most frequently found between the fortieth and fiftieth years, but recollect that there are rather frequent exceptions to the age rule.

Remember that irregularity of menstruation is often wrongly attributed to the menopause when it marks the presence of carcinoma of corpus uteri.

Remember that frequently glandular hyperplastic endometritis, associated with free hemorrhage and a watery discharge following repeated curettage, should demand a miscroscopic examination of the scrapings and the uterus extirpated if it is found to be malignant.

Remember that a show of blood following coitus, straining at stool, walking, or any active exercise is usually the first evidence noticed.

Remember that the presence of a slight watery discharge, even though odorless, is very suggestive, but if the discharge has a foul odor, the evidence of cancer is very strong.

Remember that the following points differentiate carcinoma from sloughing submucous myoma:

1. Cancer causes cachexia, hemorrhage, and very foul discharge.
2. The sloughing tissues are very friable.
3. Epithelial proliferation seen by microscope.

Remember that in case of retained placenta there will be history of recent pregnancy; the scrapings are composed of myriads of long, slender threads; and the microscope shows products of conception.

Remember that tuberculosis of the endometrium presents a mucosa that at first is smooth, yellowish-white, and glistening, later becomes yellowish-white with nodules both on the surface and below the surface of the endometrium. These nodules undergo caseous degeneration.

Remember that the tuberculin test in the cutaneous reaction will greatly assist in determining the presence of a tubercular infection.

Never omit the submission of scrapings from the mucosa or a piece excised from the cervix to a competent microscopist for examination, to furnish the final evidence of malignancy.

Treatment.—Remember that treatment is radical when all the cancer can be removed; hence the great importance of an early diagnosis. Palliative treatment is to be followed only when it is impossible to remove all the malignant growth. When the bladder and rectum are involved, the vagina invaded, or when the uterus is fixed, hysterectomy is extra-dangerous and useless.

Remember that the cancer may extend through the bladder, rectal, or uterine walls, and that great care must be used to avoid opening the bladder, bowel, or peritoneum.

In inoperable cases, thorough cauterization is the best treatment today.

This is accomplished with the cautery, either Paquelin or galvanic, or the red-hot iron. The searing of the exposed surface must be thorough to obtain the most benefit. The cautery should be reapplied with the return of pain or hemorrhage.

Remember that the general treatment consists of good tonic, plenty of good food, light exercise. The bowels must be kept open and the kidneys active.

Daily cleansing douches, and an occasional application of astringents to the cavity, such as acetone or tincture of iodin.

Remember that hysterectomy is indicated if:

1. The uterus is normally movable and symmetrical.

2. The uterus is not excessively enlarged.

3. The iliac and lumbar lymphatic glands are not enlarged, and this is difficult to determine.

4. The vaginal wall is not involved.

Remember that vaginal hysterectomy is not the best procedure, because of the operator's inability to remove all cancerous tissue and the statistical fact that practically all have a recurrence.

Remember that any operation that does not remove the parametrium is not admissible as a curative operation for cervical carcinoma.

Remember that in the inoperable cases the hemorrhage and discharges must be checked and this is best accomplished by sharp curettage of the ulcerating surface of the cancerous growth, followed by the application of the cautery as previously stated.

SARCOMA.

Remember that sarcoma is usually primary, but rarely, it may be secondary, and then it generally starts in one of the ovaries and extends to the uterus by continuity.

Remember that age is not so important a factor

as it is in cancer and the condition is found in the extremes of life.

Pregnancy, or the mechanical injuries of labor, has no predisposing effect, because it attacks nulliparæ more frequently than women who have borne children.

Remember that sarcomatous degeneration is not an infrequent occurrence in uterine fibroids.

Remember that there are several varieties of sarcomata and the malignancy varies with the different varieties; thus, the small round-celled sarcoma is most malignant, the large round-celled less, while the spindle-celled is least malignant.

Remember that the tendency of sarcoma is to send emboli by the veins to distant organs, as the lungs, liver, kidneys, spleen, and brain, and thus it differs from carcinoma, which is apt to travel by the lymphatics.

Remember that sarcomatous degeneration of a myoma should be suspected:

1. When the hemorrhage from the myoma increases or begins after cessation.
2. When the tumor increases rapidly in size after the menopause.
3. When the growth returns after removal.
4. When ascites suddenly develops.
5. When cachexia suddenly appears.

Remember that positive diagnosis is possible only by the microscopic examination of a specimen.

Treatment.—Remember that the treatment is the

same as it is for cancer, with this warning: unless all the disease can be removed, operation will hasten death because it opens the venous channels and thus favors metastasis. If the cancer is confined to the cavity of the uterus (endometrium), the prognosis after hysterectomy is favorable.

INFLAMMATION OF THE UTERUS.

Remember that the female genital tract is patulous from the vulva to the peritoneal cavity; it will at once emphasize the great danger of infection anywhere along the tract, and the importance of proper and even drastic measures that are necessary to check the progress of microbic invasion.

Remember that if the infection reaches the peritoneum it may cripple the woman for life, if it spares life at all.

Remember that the natural secretions of the vagina are acid in reaction, and possess germicidal properties to some degree. They are no doubt able to hold the fortress during time of peace, but during active inflammation due to microbic irritation, these secretions are so diluted that their germicidal action is greatly diminished.

Remember that it is seldom that an infection of such virulence as the gonococcic stops short of complete destruction of the whole genital apparatus; hence inflammation anywhere along the genital tract (whether it is known to be dangerous in origin or not) must be regarded with great suspicion.

METRITIS.

Study the anatomy of the uterus carefully; study it minutely, so that it will not appear as a mere hollow thing with a lining called the endometrium.

Happily for women, the once popular term endometritis is not now so much abused, and with its decrease in popularity, the common use of the curette as of some years ago is almost a rare procedure nowadays.

Remember that an acute inflammation of the endometrium alone is seldom found; it no doubt occurs in the beginning of some mild inflammatory processes, but it is not detected until the deeper tissues of the uterus are involved.

Remember that there are some cases of endometritis that run a short course and recover completely, even without treatment; however, many of the so-called cases of endometritis are decidedly cases of metritis, and sometimes perimetritis.

Remember that, in the cities at least, the most common cause of metritis is gonorrhea, next sepsis. There can be no doubt that, in years gone by, when the uterine sound was commonly used without any thought of asepsis and without the use of a vaginal speculum, infection was frequently carried into the uterus by the physician. It seems reasonable to suppose that the colon bacillus was a frequent intruder then.

Remember that infection in the uterine cavity rap-

idly extends beyond it, by way of blood-vessels, lymphatics, or by continuity of tissue.

Remember that occasionally cases of known gonorrheal infection in women do to all appearances completely recover, and remain well, and they later become mothers.

It is a happy fact that puerperal sepsis is not so common as formerly, since all physicians have a proper knowledge and regard of the necessity of asepsis. But remember that it does occur, and sometimes when the physician has taken every precaution against it.

Remember that the infection must gain entrance in some way through the vagina, or perhaps from a perineal tear.

Remember that it does not confine itself to the uterine cavity or to the uterus. The recently pregnant uterus takes up the infection rapidly, until the entire blood-stream is virtually charged.

Remember now that this is a general and not a local condition, and must be treated so.

Remember that the onset is usually gradual; the temperature in twenty-four hours after delivery may be 99° to 100° F., while the pulse will range from 90 to 100. Day by day, the temperature and pulse show a steady increase, and the general condition becomes more alarming.

Remember that the abdominal tenderness is not always great; there will be more or less abdominal pain and rigidity with tympanitis.

Remember that the lochial discharges usually become scanty, and are sero-sanguineous or purulent with slight odor.

Remember that these patients are more or less delirious and sometimes have a general tremor; the skin becomes mottled; the tongue has a yellowish coat and is dry and cracked.

Remember that with all these general symptoms of septic infection, with its original source from the uterus, there is often no special local evidence of this great storm in the uterus; the uterus may become the seat of multiple abscesses, or there may be periuterine abscesses walled off by omentum and intestines.

Treatment.—Remember that whatever plan of treatment is followed it must be general as well as local and must be largely supportive.

Remember that this patient must be carried along until the blood has acquired sufficient antitoxic properties to destroy the bacteria with which it is loaded.

Remember that antistreptococcus serum is at once suggested, and does seem to have a beneficial influence in some cases, while in others it has no effect whatsoever.

Remember that the infecting micro-organisms may be mixed, which accounts for the failure of our serum. The assistance of a bacteriologist should be sought.

Remember that the general treatment must be symptomatic; the bowels should be moved freely

every day with salines or enemata; forced feeding with nutritious food, eggs, milk, etc.

Remember that when the heart begins to run rapidly and shows signs of weakening there is no tonic that equals strychnin, given hypodermatically in from $\frac{1}{60}$ to $\frac{1}{40}$ grain, every six to four hours. The efficacy of quinin in these cases is doubtful, except for its slight tonic effect.

Remember that whiskey sometimes increases the delirium. Phenacetin is usually condemned in febrile conditions, but it often gives excellent remissions in temperature without any harm whatever. It should not be given continuously, but the nurse can be given a certain mark in temperature, at which time she should give five grains of phenacetin and one-half grain of codein. This should not be repeated then for some hours, or until the temperature has reached the high mark again. If pain is great, it may be necessary to resort to an occasional dose of codein or morphin.

Remember that sleep is quite necessary, and as the patients are frequently restless and nervous, it may be necessary to give the various hypnotics, with which we have had the best success.

Remember that the temperature bath is indispensable.

Remember that the curette or finger should be used early to ascertain if any remnants of membrane are remaining in the uterus. Do not scrape the

uterus unless something is there—it simply opens new avenues for absorption.

Remember that many of these cases die in spite of treatment in ten to fourteen days. Do not mistake sapremia for septicemia.

Remember that in sapremia the onset is delayed several days; the patient's convalescence after confinement has been practically normal, and suddenly there is a chill and an elevation of temperature to 103° or 105° F. Remember that there is not a corresponding increase in the pulse rate.

Remember that the patient does not seem gravely ill nor is there delirium. Remember that this is usually due to a retained blood-clot or membrane, which has undergone decomposition, and the disturbance is due to absorption of the products of decomposition.

Remember that a saprophytic infection may become septic, by furnishing a medium for the development of septic micro-organisms.

Removal of blood-clots or membranes, and washing out the cavity are usually followed by recovery. These may have to be repeated daily for two or three days.

ENDOMETRITIS.

Remember that the starting-point of inflammatory affections of the uterus is, usually, the endometrium, and may extend, eventually, to the muscular wall or

to the peritoneum. Thus the uterine mucosa is the origin of nearly all of the inflammatory lesions of the pelvic organs.

Remember that all inflammations of the endometrium may be divided into the infectious and non-infectious.

Remember that septic endometritis is nearly always found following abortion and labor. It may follow insertion of instruments into the uterine cavity or operative procedures upon the cervix.

Remember that in acute endometritis there is a leucorrhea, sometimes profuse, or it may be thin and serous.

Remember that the history of a previous operation on the uterus or instrumental treatment should suggest endometritis.

Remember that sterility and abortion are very common in endometritis, caused by the changes produced in the mucosa by the disease.

Remember that the general physical condition of the patient varies. She may experience no ill feeling, or she may be hysterical, complain of dyspepsia, flatulence, and loss of appetite.

Remember that the speculum reveals the origin of the leucorrhea and usually the cause of the endometritis, such as a torn cervix.

Remember that the gonorrheal variety of endometritis is due to the presence of the gonococci in the endometrium.

Remember that in the normal state the cavum

uteri is absolutely free from pathogenic micro-organisms, hence infections must come from without. These may occur by the organisms ascending from the vagina, as is seen in the gonococci; or by manipulations at labor or at time of an abortion; or the most common method is by instruments introduced into the uterus.

Remember that the organisms most frequently found are the gonococci, the streptococci, and the staphylococci. Infection by other organisms is not so common.

Remember that microscopic examination reveals the organism causing the endometritis and should always be done before any opinion is given by the physician as to whether it be a gonococcus or streptococcus infection.

Treatment.—Remember that the treatment of a simple non-infectious case should be systemic rather than local and cases occurring in virgins should always be thoroughly treated systematically before resorting to local treatment.

Remember that the needs are: first, a thorough diagnosis from the standpoint of internal medicine; and second, the treatment of conditions which disturb the balance in the general circulation.

Remember that in simple endometritis rest in bed, a bland diet, hot sitz-baths, and hot vaginal douches of water, either plain or salt, are all that are required.

Remember that cases due to malposition, flexures,

and stenosis, or lacerations of the cervix, should receive appropriate treatment.

Remember that in chronic cases constitutional measures are of more value than local treatment.

Remember that in the non-infectious variety with a violent onset it is better to defer local treatment, in the absence of positive indications to the contrary.

Remember that in chronic gonorrheal cases a curettage will be necessary and especially should the cervical mucosa be thoroughly removed because of the many glands contained.

Remember that in septic cases, where there are retained membranes, the uterus should be thoroughly curetted and washed with some hot antiseptic solution, such as liquor cresolis 2 per cent, or a solution of bichlorid 1:4000, or wiped out with tincture of iodin. The douche should be given through a reflex irrigator unless the cervical canal be very patulous, to insure unimpeded outflow of solution.

Remember that not attempting to do too much locally in septic cases will insure better results. A good intrauterine douche at the time of dilatation and curettement is sufficient, followed by hot vaginal douches several times daily, and hot fomentations over the abdomen.

The patient should receive a good tonic treatment, elixir of iron, quinin, and strychnin (N. F.) or peptonate of iron and manganese, quinin bisulphate gr. iij, t. i. d.

The diet must be nutritious, and fever should be controlled by bath. Alcoholic stimulants and ammonia should be used freely in severe septic cases.

Remember that Wright's vaccines should be tried in general sepsis. Where possible the vaccines should be from patient's germs—autogenous.

Remember that injection of polyvalent serum should not be neglected when a general septic condition develops.

ENDOCERVICITIS.

Remember that this condition is usually secondary but may be primary. Gonorrhea is the most frequent cause of the primary. The secondary form usually results from an extension upward from the vagina but may be caused by downward extension from the uterus.

Remember that the cervical canal is especially exposed to various forms of infection because of the anatomical relation between the cervix and vagina. Again, the canal usually contains germs, and any alteration in the canal, such as traumatism or congestion, allows the bacteria to gain entrance, multiply rapidly, and become pathogenic.

Remember that, owing to the presence of the glandular crypts that afford a lodging place and protection, it is very difficult to destroy an infection.

Remember that the internal os uteri offers a barrier to the passage of the germs to the uterine body.

Remember that leucorrhea is often the only complaint. The discharge is thick, clear, and tenacious, like the white of an egg.

When the infection is pyogenic, the discharge becomes opaque and creamy in color.

Remember that vaginal examination reveals a patulous os, the vaginal portion of the cervix swollen, and frequently a laceration, if the patient be a multiparous woman.

Treatment.—Remember that cervical injury should be repaired by trachelorrhaphy or by amputation of the cervix.

Remember that a thorough curettement of the canal is strongly indicated, unless the gonococcus be the infecting organism. Usually the internal os uteri is sufficient, for a time at least, for preventing the involvement of the uterine cavity in gonorrheal endocervicitis, and care should be exercised not to carry the gonococci through in the treatment.

The application to the canal of a solution of silver nitrate, sixty grains to the ounce, or iodin is excellent.

In gonorrhea some variety of silver salts should be used—silver nitrate, protargol, 5 per cent, or argyol, 50 per cent solutions.

The application of phenol for one minute followed by alcohol gives excellent results.

The vagina should be douched daily with some antiseptic, such as liquor cresolis comp. 2 per cent.

SUBINVOLUTION OF THE UTERUS.

Remember that this is an arrest of a physiologic process of involution, following labor or abortion, by means of which the uterus regains its normal size and weight.

Remember that involution is fatty degeneration and absorption of the muscular and connective tissues of the uterus.

Remember that infection of the uterus during puerperium is one of the most frequent causes and the heavy uterus eventually becomes displaced.

Remember that cervical and perineal lacerations, however slight, always interfere with the process of involution.

Remember that displacement and subinvolution are often due to tight abdominal binders following labor; lying constantly on the back; and the getting out of bed too early following parturition or abortion.

Remember that the patient complains of lumbosacral pain and a bearing-down sensation or weight in the pelvis.

The amount of the menstrual flow is increased because of the congestion. There is gastrointestinal disturbance with the loss of appetite; headache, either occipital or vertical; constipation; and eventually hysterical symptoms develop.

Remember that physical examination reveals a

large uterus, perhaps displaced, the depth of the cavity increased. The enlargement of the uterus is symmetrical, and there is no tenderness.

Treatment.—Remember that there is usually an endometritis, as well as the enlarged uterus, to treat.

Remember that when subinvolution is associated with either retrodisplacement or lacerated cervix or perineum no cure can result until the associated lesions are corrected.

Remember that curettement, performed as under endometritis, is indicated.

The reduction in the size of the uterus is accomplished by both general and local treatment.

Local.—A gallon of hot saline solution should be given slowly as a douche just before going to bed.

Following this, the vaginal fornices should be packed with gauze saturated with the following:

℞ Glycerini .....3 viij
Magnesii sulphatis.....3 v
Phenolis .....3 ss
Misce.
Heat until all is dissolved, being careful not to add any water.

Ichthyol may be added to the above. This is an excellent depletory, and thus relieves the local congestion and hastens venous circulation.

Once or twice a week half to an ounce of blood from the cervix with a sharp bistoury. All local treatment must be stopped during the menstruation.

General.—A nourishing and easily digested diet should be given.

Plenty of pure water should be drunk daily, as this relieves constipation.

Should constipation exist, the bowels must be opened by use of cathartics, and those producing watery evacuations are best. The salines are good, but if anemia be present, pilulæ aloes et ferri (U. S. P.) may be given daily and salines once a week.

Light exercise daily in the open air and sunshine, such as driving and walking, should be recommended.

SUPERINVOLUTION.

Remember that this is a rare condition, occurring more often, probably, after abortion than labor.

Remember that the atrophic changes occurring in the uterus cause amenorrhea and sterility.

Remember that the history of the case is important, as it shows the patient in good health previous to her last confinement and the puerperium complicated by hemorrhage, or septic infection.

Remember that examination reveals a uterus that is greatly reduced in size, and indeed it may be so reduced that nothing remains to mark its presence except a small knob in the dome of the vaginal vault.

Treatment.—Remember that the basic principle in treatment is to increase pelvic blood supply.

This is accomplished in the following manner:

1. Dilate and curette the uterus.
2. Warm vaginal douche night and morning, us-

ing one gallon of water at temperature between 95° and 102° F.

3. One of the following drugs should be administered: Manganese binoxid gr. j to v thrice daily; apiol ♏iv to viii thrice daily; or potassium permanganate gr. ss to j thrice daily.

4. Constipation, when it exists, is best relieved by aloes combined with podophyllum.

5. Daily exercise in the open air and general massage and electricity should be used.

6. Sexual intercourse should be forbidden.

LACERATIONS OF THE CERVIX.

Remember that lacerations are very common and in many instances are caused by meddlesome obstetrics.

The tear may be only on one side, when it is spoken as unilateral; or on both sides, when it is called bilateral; or multiple or stellate tears, when there are several lacerations.

Remember that there are no symptoms pathognomonic of the condition and those present are due to lesions caused by the laceration.

These patients usually complain of bearing-down pains in the back in the sacral region, and disturbances of menstruation.

Remember that examination by both sight and touch reveals the pathologic condition.

Although the cervix uteri is susceptible of great distention, especially with the bag of water preced-

ing the child's head, yet it is seldom that a woman goes through a confinement without more or less cervical laceration.

Nature makes a great effort to heal these tears, and sometimes, when they have been slight, a few weeks will almost entirely obliterate the injury.

Lacerations are most frequently unilateral; often bilateral; and least frequently is the stellate variety.

Primarily, a cervical tear may not cause much trouble, although it does prevent to some extent perfect involution of the uterus.

Remember, however, that later we have eversion of the cervical mucous membrane; increased secretion from the irritated cervical glands follows; infection and inflammation are natural sequences; later results may bring forth scar tissue and cystic degeneration.

Sometimes the chronic inflammation leads to extensive hypertrophy of the cervix, which becomes heavy and drags the uterus down into the vagina.

Remember that if you expect to wait for pathognomonic signs and symptoms of cervical laceration to appear you will no doubt have let the golden moments slip past, and you may have serious complications to deal with—perhaps a carcinomatous cervix.

Let it be emphasized that the symptoms are those of the complications.

Subinvolution and inflammation are responsible for the menstrual disturbances; displacements bring

on backache, feeling of fulness, dragging sensation, or weight in the pelvis.

Vesicle or rectal symptoms may be caused by either pressure or tension on their walls. An irritating salpingitis may result in closure of the fimbriæ, or the uterine discharge may be sufficient to prevent pregnancy.

Keep in mind, then, that cervical lacerations alone do not as a rule cause grave symptoms, but often a multiplicity of symptoms arises from cervical lacerations and the common complications.

Remember that an obstetrician should not discharge his patient after she has been confined, until two or three months have elapsed; then, upon examination, if he finds that the cervix is entirely healed, with perhaps only a slight depression at the site of the tear, he may safely discharge her, but if it is still unhealed, he should advise repair within a reasonable time.

Do not content yourself with a speculum examination. Sometimes the speculum will turn out the anterior and posterior lips; when there is a bilateral laceration, this will make the cervix appear smooth and perfectly intact.

Make a digital examination first, at which time one can examine the entire pelvis and see if there is any other trouble; a laceration of the cervix can be readily felt with the examining finger.

Don't fail to examine with the speculum also; that will bring into view the character of the discharge;

the condition of the cervical mucosa; it will show if there is cervical hypertrophy, ulceration or erosion, or cystic degeneration.

Remember, while examining with the speculum, that it is a splendid idea to catch the anterior and posterior lips with hooks and draw them down; this brings to view the extent and character of the laceration.

Treatment.—Remember always that cancer does, in many cases, develop at the site of laceration.

Remember that the treatment is operative; but not every cervical laceration needs to be operated on. Every woman with a lacerated cervix would be safer, if it were repaired, and all of them bear watching. The following rules furnish a guide as to what cases to operate on:

1. All lacerations complicated with indurations and hypertrophy of cervical tissues or eversion of the cervical mucosa; cystic degeneration; and erosion.

2. Laceration causing subinvolution of the uterus, displacement, and endometritis.

3. Lacerations with a sensitive plug of scar tissue in the angle of the wound.

Remember that if there is endometritis the cavity of the uterus should be curetted before tear is repaired.

The lips of cervix should be caught with two forceps after a Sims' perineal retractor has been inserted into the vagina.

The surfaces to be denuded are marked out with a scalpel on the torn cervical margin, in such manner that the incisions pass beyond the angles of laceration externally, and a strip of mucous membrane about one-fourth inch wide is left in the middle of each lip for reconstruction of the cervical canal. The surfaces thus outlined are entirely cut out beyond the scar tissue. The raw surfaces are coapted and held by interrupted sutures, care being taken in inserting them not to pass through the cervical mucosa.

Remember that it is important that all of the scar tissue be removed, and especially that at the angle of the wound. This tissue is easily recognized by touch.

Remember that in multiple or stellate tears amputation of the cervix may be indicated instead of an attempt to repair, owing to the fact that too much tissue would have to be sacrificed, leaving a very small cervix with an uncertain cervical canal. Again, when the cervical mucous membrane has undergone cystic degeneration, amputation may become necessary.

Remember that lacerations of the cervix should not be repaired at the time of occurrence, as the condition of the tissues following labor is such as to preclude a correct determination of the tear, and there is great danger of infection.

After operation, the patient should be kept in

bed for ten days and not allowed to go out until at the end of two weeks.

Remember that all lacerations of the cervix do not need repair (trachelorrhaphy). When the laceration has healed nicely with a notch on one or both sides, which is soft, looks pink, and feels like the other portions of the cervix, it cannot well be improved, hence needs no repair. This is the normal cervix of the multipara.

Remember that a woman rarely comes for advice or treatment for a lacerated cervix alone, but for leucorrhea, menstrual disturbances, or other complications, referable to the pelvic organs. Perhaps the cervical laceration was primarily to blame, but now these complications must be treated as well to accomplish the desired results.

Keep in mind the great necessity of examining all the pelvic organs for diseases of the ovaries and Fallopian tubes, displacement of the uterine fundus, etc., because it is absolutely necessary to take care of these complications if they exist to obtain the desired results.

Remember, if there are pelvic complications, that they and the cervical laceration can be taken care of with one anesthetic. Repair the cervix first. If there has been evidence of endometritis, dilatation of cervix with gentle and thorough curettage of the entire cavity of the uterus should be done, after which it may be advisable to wipe out the uterus

with equal parts of tincture of iodin and carbolic acid; the vagina should be protected with cotton or gauze, and both the cervix and vagina should be cleaned off immediately with alcohol on a gauze sponge to prevent burning with the carbolic acid.

Now the anterior and posterior lips of the cervix are grasped with single tenaculum forceps and held by an assistant, the perineum being retracted with a self-retaining retractor; the scar tissue in each laceration is now well trimmed out, extending it as high as necessary into each vaginal fornix. As a rule, both sides may be trimmed out before any sutures are introduced. If there should be severe hemorrhage on account of deep excision of scar tissue, it may be necessary to sew up that side to prevent too much loss of blood before proceeding to the other. It is absolutely necessary to have a slip of cervical mucous membrane on both the anterior and posterior lips to make the future patulous cervical canal. If the lacerations necessitate the excision of much tissue, it is a splendid rule to place a continuous buried catgut suture first, just as in sewing up a deep wound elsewhere, and finally bringing the surfaces nicely together. If not too extensive, two or three sutures on each side, which include all the tissue, are sufficient. Absorbable suture material should be used unless conditions may entirely contraindicate their use. Silkworm gut is rather difficult and painful to remove, especially if the perineum, too, has to be repaired. A forty-day chromic

catgut is perfectly reliable and will last twelve to fifteen days in the cervix. Van Horn prepares an obstetrical catgut tested to last against the action of the lochial discharge for ten days.

A stellate laceration should be handled just as a unilateral or bilateral laceration, keeping in mind, however, that care must be exercised not to remove too much cervical tissue, so that there may follow an acquired cervical stenosis or atresia.

Remember, if there has been a great deal of damage to the cervix and it is plain that much tissue has to be sacrificed to get rid of all the scar tissue, that it may be decidedly better and safer to do an amputation of the cervix than to attempt its repair.

HYPERTROPHY OF THE CERVIX.

Remember that hypertrophy may be of either that part of the cervix above the vaginal junction, or the part below.

Remember that this is the only form of uterine prolapse met in virgins or sterile women, except in the rare acute cases, where the prolapse may be due to injury or violence.

Remember that supravaginal hypertrophy causes displacement of the uterus, due to the increased weight on the uterine ligaments.

Remember that examination reveals an elongated cervix, perhaps protruding at the vulvovaginal orifice; the vaginal dome is not obliterated; and the fun-

dus uteri is found, either in its normal position or occupying a higher position than is consistent with the degree of cervical descent.

Remember that this condition occurs in virgins and sterile women also, while prolapse of the entire uterus occurs only in those who have borne children.

Remember that there may be no evidence of traumatism in the cervix or perineum and the vaginal dome may be normal.

Remember that the knee-chest posture causes an apparent elongation to disappear if due to prolapse of the uterus, but will have no effect in cases of hypertrophy.

Treatment.—Remember that a cure can only be effected by surgical measures.

Remember that if the hypertrophy is slight and causes no symptoms or discomfort nothing should be done.

The best treatment is high amputation of the cervix. The incision is made above the vaginocervical junction, through the wall of the vagina down to the cervical tissue. The cervix is then pulled down by forceps, and the cervical tissues are separated from the surrounding structures in front of and behind the finger, as far as the uterine vessels.

The arteries should be ligated with catgut ligatures, carried around then by a curved needle. The cervix is now divided on each side down to the ligated vessels. A curved Hagedorn needle is threaded with silkworm gut and passed through the center of the

anterior vaginal wall, the loose tissue, and the cervix into the cervical canal. A similar suture is passed posteriorly. The cervical lips are amputated, and three or four silkworm-gut sutures passed through the vaginal wall and cervical tissues, similar to the ones already introduced; and all are tied. A strip of gauze is carried along the cervical canal to internal os and allowed to remain for forty-eight hours, but is not to be replaced.

Remember to keep the cervical canal open, and its patulency should be ascertained after the suturing is completed.

CERVICAL POLYPI.

Remember that mucous polypi are the most frequent, but occasionally fibroid polypi and papillary growths are found.

Remember that the mucous polypi are the result of inflammation of the intracervical mucosa.

Remember that there are no distinguishing clinical symptoms. Leucorrhea is usually present, caused by the endocervicitis, and should the polypus become infected, the discharge becomes purulent and offensive.

Remember that uterine hemorrhage is a fairly constant symptom and usually follows exertion, such as straining at stool, or sexual intercourse. It may be slight, or it may be so profuse and persistent that the patient becomes pale and waxy in appearance.

Remember that menorrhagia or dysmenorrhea is

very common, due to irritation and consequent uterine congestion, or to the effort of the uterus to expel the polypus.

Remember that physical examination by both touch and sight yields the only positive information. It may be necessary to dilate the cervical canal, but usually it is soft and patulous.

Remember that it should be a routine rule of practice to examine microscopically every polypus that is removed to determine the question of malignancy. Never fail to observe this rule, that when necessary the patient may have the benefit of an early hysterectomy.

Treatment.—The treatment is always surgical and consists in the removal of the growths.

ACQUIRED ATRESIA OF THE CERVIX.

Remember that atresia of the cervix prevents the escape of the menstrual blood and uterine secretions. These gradually accumulating within the uterine cavity produce the following conditions:

Hematometra, when the uterus is filled with blood.

Hydrometra, when the accumulation is mucus.

Pyometra, when pus.

Physometra, when there is a collection of gases.

Remember that after the climacteric there will be no retention; hence no symptoms.

Remember the importance of the history detailing an operation on the cervix; vaginitis caused by diphtheria, scarlatina, or variola.

Remember that amenorrhea accompanied by a menstrual molimen is very significant of atresia.

Remember that physical examination reveals a round, symmetrical, elastic tumor. If there is no uterine hypertrophy, fluctuation may be elicited. The uterine sound introduced by sight through a vaginal speculum determines not only the atresia but also its location.

Treatment.—Remember that the treatment consists in opening the canal and keeping it patulous. This is accomplished by either incising or divulsing.

A speculum is introduced into the vagina, and the anterior and posterior cervical lips are seized by forceps and pulled down toward the vulvar orifice.

Should the obstruction be seen at the external os, it is incised by a straight bistoury.

If higher up in the canal a dilator is passed into the cervical canal until it meets the obstruction; the cervical canal is then forcibly dilated, for a short time, when the blades will pass farther into the canal upon relaxing the pressure. A new position of dilators farther up, and again dilating forcibly, tears apart the canal farther up. This intermittent dilatation is continued until the uterine cavity is reached.

The uterus is then washed out thoroughly with some hot antiseptic solution, as 2 per cent lysol solution. The canal is packed tightly with strips of gauze, which should remain for forty-eight hours.

Every second day the vagina should be thor-

oughly douched with antiseptic solution, and the pack in the canal changed. The patient should remain in bed ten days. She should use hot vaginal douches daily for several weeks after being allowed out of bed.

In cases of pyometra the pack should be changed daily, and the uterine cavity thoroughly cleansed with a hot lysol douche.

Tonics containing quinin and strychnin should be given when needed.

ACQUIRED STENOSIS OF THE CERVIX.

Remember that this condition is often produced by uterine displacements and most often caused by anteflexion.

Remember that obstructive dysmenorrhea is a prominent symptom, produced by the interference with the escape of the menstrual fluid, and consequently painful uterine contractions to force out the fluid.

Remember that sterility and leucorrhea are present and when associated with painful menstruation should arouse suspicion.

Remember that the passage of the uterine sound under strict aseptic precautions will determine not only the stenosis but location and probable cause.

Treatment.—Remember that dilatation and curettement of the uterus cure stenosis, but they should be followed by dilatations every week or two for five or six months to prevent recurrence.

CHORIOEPITHELIOMA.

Remember that this is a malignant disease developing at the site of the placenta subsequent to labor or during pregnancy.

It is always hemorrhagic in nature, characterized by early and widespread metastasis, and usually ends fatally.

Remember that uterine hemorrhage is always present and usually the first indication of the malignant growth. Usually follows labor at term, abortion, or after the expulsion of a hydatid mole. May be continuous in bleeding but small in amount; or it may be profuse, resembling a postpartum hemorrhage, but the things that control a postpartum either aggravate or have no effect upon a chorioepithelioma.

Remember that a thin, offensive, watery discharge makes its appearance soon after the hemorrhage. It is always continuous but worse between attacks of hemorrhage. During progress of the disease the leucorrhea becomes more profuse.

Remember that pain at seat of the disease is an early and constant symptom. It is usually referred to the pelvis or lumbosacral region and described as cramping, growing, or sharp and lacinating.

Remember that in physical examination the vagina should be thoroughly explored for secondary growths. Early, these growths occur as small rounded masses and are more or less hard to the

touch like fibroid nodules. Later, they break down and slough, leaving scooped-out areas of necrotic tissue. The cervix is soft and dilated so that the finger may be introduced. A tumor of the consistency of a fibroid growth, sharply defined and nodular in character, may be felt upon the uterine wall. Later, the growth softens and bleeds easily, and eventually sloughing occurs.

Remember that microscopic examination of scrapings should always be made by a competent microscopist.

Remember cancer differs in the following:

1. No connection with pregnancy.
2. Occurs in advanced life—at or near the menopause.
3. Uterine colic occurs late or not at all.
4. Uterine wall becomes hard and indurated.
5. Duration of disease much longer—one to two years.
6. Microscopic examination shows characteristic structures differing from those found in chorioepithelioma.

Treatment.—Remember complete abdominal hysterectomy and removal of metastatis if possible.

Remember that the value of an early diagnosis lies in an early radical treatment if the patient is to be benefited.

CHAPTER V

DISEASES OF THE TUBES AND OVARIES.

SALPINGITIS.

Remember that this very common disease is due, in the vast majority of cases, to extension upward of an endometritis.

Remember that there is such a condition as catarrhal salpingitis, but the symptoms are so slight as not to be noticed.

Remember that purulent salpingitis is caused by septic and gonorrheal endometritis.

Remember that the gonococci most frequently are the cause of pus-tubes and this fact renders gonorrhea such a serious complaint in the female.

Remember that in addition to the symptoms caused by the tubal lesion consideration must be given to those that are dependent upon the coexisting endometritis.

Remember that pain is an important symptom and may result from mechanical pressure and displacement of the uterus and appendages; or it may be caused by tractions upon adhesions that have formed between the tube and adjacent structures.

Remember that the character and severity of the

pains vary from a dull heavy sensation to acute, agonizing paroxysm. In some cases the pain takes the form of colic.

Remember that the pain is usually constant but is influenced by position. Thus the recumbent posture relieves the pelvic weight and also pain; hence these patients, as a rule, are better on arising in the morning. Walking, exercise, coition, constipation, and often urination make the pain worse. At the menstrual period the congestion of pelvic organs increases the pain.

Remember that the pain is located in one or both iliac regions and may extend to the lumbosacral region or radiate down the thighs.

Remember that dysmenorrhea is a somewhat constant characteristic symptom. It usually begins a week prior to the flow and does not cease for several days after it stops. It radiates from the iliac region into the pelvic cavity and down the thigh.

Remember that sterility is the rule in these cases, due to the closure of the fimbriæ of the tubes or the thickening of the external coat of the ovary, thus preventing the rupturing of the Graafian follicles and the escape of the ovum.

Remember that physical examination reveals an enlarged tube or a tumor in the ovarian region. All tumefactions should be traced, by deep palpation, from one of the uterine cornua.

Remember that adhesions can be determined by the latitude of uterine motion. When the pelvic

organs are fixed and immovable it signifies that the adhesions are general.

Treatment.—Remember that all cases are surgical, but the conditions vary the surgical procedure.

In cases where the infection and pus are confined to the tubes, celiotomy is indicated; the tubes removed, adhesions broken up, and the uterus taken care of as indicated. In cases where the tube has ruptured but the abscess has been walled off in the pelvis, then it is often the part of wisdom to drain through the vagina first; and after several days of rest for the patient a subsequent operation to remove diseased tubes and take care of the adhesions and uterus as indicated should be done.

Don't sacrifice both ovaries in any pelvic operation if it is possible to avoid it; the matter of hysterectomy in the case of pus-tubes must be decided entirely upon the merits of the case: it depends largely upon the character of the infection. Not every case of pus-tubes demands the complete loss of the sexual apparatus of the woman.

DISEASES OF THE OVARIES.

Remember that in acute cases following an infection of the uterine mucosa and reaching the ovaries by way of the tubes or lymphatics the ovarian symptoms cannot be separated from those dependent upon the uterine inflammation or the local or general peritonitis which may accompany the affection.

Remember that in acute cases, due to sudden sup-

pression of the menses, exanthemata, acute rheumatism, or poisoning from arsenic or phosphorus, there are pain and tenderness in the iliac regions, fever, and a rapid pulse.

Remember that the pain radiates to the lumbosacral region, bladder, thighs, and occasionally to the breasts.

Remember that the parotid gland may become swollen. The patient lies with her knees drawn up.

Remember that physical examination reveals an enlarged and tender ovary; and the organ is usually found prolapsed and adherent. If an ovarian abscess has formed, it will be felt as a round or globular mass, and in some cases fluctuation may be elicited.

Remember that the non-puerperal ovaritis and appendicitis must be carefully differentiated. They both have sudden onset, pain, and tenderness and fever. Vomiting with nausea is very common in appendicitis. Muscular rigidity of the right rectus, with especial tenderness over McBurney's area, is somewhat characteristic of appendicitis. In appendicitis the onset is more of a general abdominal pain; while in acute ovaritis the pain is confined to the lower pelvic region, and the general systemic disturbance is not nearly so great.

Treatment.—Remember that puerperal cases are treated the same as acute purulent salpingitis: i.e., the septic endometritis is treated, and the tubal and ovarian troubles allowed to take care of themselves.

The non-puerperal cases are treated by absolute rest in recumbent posture, using the bedpan when the bowels and bladder are to be emptied.

The vagina is douched several times daily with a gallon of hot normal salt solution. Hot compresses or an ice bag are placed over the affected organs.

Bowels should be opened thoroughly with a saline purge and kept open daily by half-bottle of magnesium citrate.

The diet should be liquid for two or three days, then semisolid until patient is out of bed.

Morphin should be used if much pain and restlessness are present.

Fever is controlled by sponging. The attack usually yields in twelve or fourteen days.

CHRONIC OVARITIS.

Remember that the symptoms may vary when the ovarian trouble is associated with endometritis, salpingitis, adhesions, and pelvic tumors.

Remember that pain is the most constant and significant symptom. In one or both iliac regions, it is usually more severe at menstruation. The pain radiates to back, bladder, and down the thighs. Like the acute condition, the pain is worse in the erect posture, walking, pressure of clothing at the waist, sexual intercourse, during defecation or urination.

Remember that menstrual disturbances vary. There will be, most likely, menorrhagia and metror-

rhagia in cystic ovaries; while the cirrhotic ovary produces an opposite condition.

Remember that a large cystic ovary may be recognized on palpation as a large, oval, or globular mass located on either side of the uterus in the cul-de-sac of Douglas.

Remember that the cirrhotic ovary is not so easily palpated in the fleshy patient, but can be palpated through the thin and relaxed abdominal wall.

Treatment.—Remember that the treatment may be palliative or radical.

Remember that the palliative treatment is not applicable to every case. A careful study of pelvic conditions should be made, and if complicated with salpingitis or the ovaries are greatly enlarged and prolapsed and the adhesions present, the palliative treatment is only temporary in effect. Patients that are dependent upon their work for a living should be told how much or how little benefit can be expected from this line of treatment. They should not be encouraged to pursue a line of treatment which requires much time and money, without a reasonable hope of success.

Remember that after the palliative treatment is stopped the pain and other symptoms usually return —and a cure is not permanent.

Remember that complete rest in bed for five or six weeks should be insisted upon. The vagina should be douched several times daily with a gallon of hot normal salt solution. The patient should

insert a tampon saturated with glycerin on going to bed, and remove it the following morning. The vaginal vault and cervix should be painted twice a week with tincture of iodin, and a tampon of ichthyol and glycerin introduced and allowed to remain till following morning.

A very excellent pelvic depletory and at the same time anesthetic to mucosa is made as follows:

℞ Glycerini ..... ℥ viij
Magnesii sulphatis ..... ℥ v
Phenolis ..... ℥ ss
Misce.
Heat till all are dissolved, making a clear solution. Keep free of water.

Ichthyol may be added if desired, or, where an astringent is needed, zinc sulphate may be added.

Internally, potassium iodid may be given with good results. A saturated solution is ordered and begun with five minims thrice daily after meals. The dose is increased one minim daily until fifteen or twenty minims are taken. Corrosive sublimate is given in hundredth-grain doses, or, instead, the chlorid of gold and sodium in gr. $\frac{1}{40}$ to $\frac{1}{15}$ may be used for its direct effect on the ovaries.

The bromids, either sodium or potassium, should be given if there is restlessness.

A good bitter tonic is frequently indicated, and elixir ferri quininæ et strychninæ phosphatum (U. S. P.) in teaspoonful doses thrice daily after meals is excellent.

The severe menstrual pains may be relieved with tincture of cannabis indica, antipyrin, bromid, or the tincture of pulsatilla.

Light exercise in open air may be permitted. The clothing should hang from the shoulders and not from the waist.

Remember that almost all cases eventually demand surgical intervention. The operation varies from partial to complete removal of the ovaries.

Remember that it is best to leave as much ovarian tissue as possible, if only a part of one ovary.

Remember that where there is any uterine displacement it should be corrected at the operation.

PROLAPSE OF THE OVARIES.

Remember that where there is a prolapse of the uterus it will eventually pull the ovaries down.

Remember that prolapse of the ovaries sometimes occurs in persons suffering from a chronic disease in which there is loss of weight. The displacement is due to the lack of pelvic fat and the relaxed condition of the pelvic organs and their support.

Remember that the left ovary is more often prolapsed than the right. This is due to the following reasons:

1. There are no valves in the left ovarian vein, and it opens at right angles into the renal.

2. The rectum lies to the left of the median line; hence chronic constipation will produce its mechanical effect upon the left ovary.

3. There is greater hypertrophy of the left ovary during pregnancy, and its weight is thereby increased.

Remember that there are no pathognomonic symptoms and they are often combined with those caused by chronic ovaritis or subinvolution of the uterus.

Remember that pain is the most prominent symptom. It is increased by exercise, upright position, defecation, urination, and coitus. It is felt in the iliac region or deeply located in the pelvis near the sacrum, and it may radiate to the hips, rectum, or down the thighs.

Remember that menstruation is affected and dysmenorrhea is very common, and ovarian pain is increased during periods because of the congestion.

Remember that physical examination furnishes the only conclusive evidence, when the ovary may be felt. It may be recognized by its shape, and its connection with the cornu uteri.

Treatment.—Remember that when the prolapse is due to subinvolution or to debilitating diseases the palliative form of treatment should be followed, but if the ovary be greatly enlarged or adherent, this form of treatment is contraindicated.

Remember that rest is very essential and during menstruation the patient should be confined in bed. Coitus should be forbidden. The vagina should be douched twice daily with a gallon of hot normal saline solution. Daily a tampon, either of glycerin or of phenol-magnesium-sulphate-glycerin combina-

tion, should be inserted until the congestion is reduced, when it is used less frequently.

The bowels should be kept open by the use of salines.

The patient should assume the knee-chest position for fifteen or twenty minutes daily, to allow the pelvic organs to drop back into their normal position.

Remember that radical treatment always calls for a conservative operation on the ovary.

SOLID TUMORS OF THE OVARIES.

Remember that fibromata are very rare and do not attain large size and are usually unilateral.

Remember that there are no characteristic symptoms. The tumor is not painful, unless it should attain a large size and become wedged in the pelvis.

Remember that bimanual examination reveals a round, pedunculated tumor that is freely movable and not connected with the uterus.

Remember that removal of fibroids is the only treatment and delay is dangerous, because it is impossible to exclude malignancy.

Remember that cancer of the ovary is usually found in both ovaries and usually occurs in a cystic or solid ovarian tumor.

Remember that the early symptoms will be those of the benign growth in the ovary, but later when malignancy occurs the clinical picture changes materially. The tumor takes on a rapid growth,

ascites develops, chronic peritonitis occurs, with cachexia and gradual loss of weight.

Remember that physical examination will reveal the presence of a pelvic tumor, which may or may not be ovarian in shape, but which is not connected with the uterus.

Treatment.—Remember that all tumors of the ovaries demand immediate removal. The benign may take on malignancy.

The malignant tumor should be removed at once together with tubes and all enlarged pelvic glands.

OVARIAN CYSTS.

Remember that the symptoms develop very gradually and the tumor is quite large before the patient is aware of anything abnormal occurring in the pelvis.

Remember that when the cyst is large it may press upon the rectum and interfere with the venous blood flow, causing hemorrhoids; or by pressing upon the bladder produce irritation, which, together with the lessening of its holding capacity, causes frequent urination.

Remember that the proximity of the cyst to the rectum, appendix, and Fallopian tubes subjects it to the dangers of infection and the resulting inflammation. Tapping may also lead to infection of the cyst.

Remember that rupture of an ovarian cyst may occur, producing sudden abdominal pain, diuresis, al-

teration in the shape of the tumor, and in septic cysts, acute peritonitis.

Remember that the increased weight of the ovary causes displacement; hence bimanual examination reveals the cyst low down in the pelvis, either in the cul-de-sac of Douglas, or, if in the broad ligaments, then low down and to the side of the uterus.

Remember that the tumor is round or ovoid in shape with a smooth surface, and regular outline.

Remember that great care should be used in distinguishing between pregnancy and ovarian cysts.

Remember that time is an important aid in differentiating pregnancy, and the signs of pregnancy should be given plenty of time to manifest themselves before deciding the question.

Remember of course that fetal movements and heart sounds can mean but one thing.

Remember that in ascites an area of fluctuation changes with position of the body and no resistance is offered to the palpating hand.

Remember that in ascites the areas of resonance and dulness change with the position of the patient.

Remember that the upper line of dulness on percussion with the patient in the upright posture will be concave in ascites, but convex in an ovarian cyst.

Treatment.—Remember that early operation for the removal of the cyst is the only treatment.

Remember that when operation would be almost certainly fatal, the patient may be made temporarily more comfortable by tapping the cyst with a trocar.

ECTOPIC GESTATION.

(Extrauterine Pregnancy.)

Remember that, normally, the ovum is fertilized by the spermatozoa somewhere in the tube, after which the ovum is carried to the uterine cavity by the peristaltic action of the tube and by the cilia within the tube, where it attaches itself; and normal pregnancy ensues.

Now remember that extrauterine pregnancy is fertilization of the ovum and continuation of gestation outside the cavity of the uterus.

Remember that ectopic gestation, extrauterine pregnancy, and tubal pregnancy are synonymous terms. It is safe to say that nearly all extrauterine pregnancies are tubal in the beginning; the subsequent history and development of the ovum may change their location.

Now remember that the cause of extrauterine pregnancy is something that prevents the fertilized ovum from passing through the Fallopian tube to the uterus; and this is usually found in women who at some time have suffered from pelvic inflammation, where adhesions may have produced kinks in the tube, where tumors may have compressed the tube, where displacements of the tubes have formed an acute angle or twist, or where there is chronic salpingitis with swollen mucosa or strictured lumen; there may be a diverticulum in the Fallopian tube;

and it is also said to occur in cases of congenital malformation, where the tubes are long and tortuous with a small canal.

Many textbooks say "that it occurs after a long period of sterility." Now these women are doubtless sterile by virtue of the fact that the pelvic organs have been crippled by disease, and it is difficult for pregnancy to take place at all; and if the spermatozoa can meet the ovum at all, tubal pregnancy results. These women may perhaps only ovulate occasionally through the thick capsule covering the ovaries.

Remember that the fertilized ovum may lodge in any portion of the tube that furnishes sufficient resistance. It may lodge in that portion of the tube that passes through the cornu of the uterus; this is known as interstitial pregnancy. If near the distal end of the tube, it is called ampullar pregnancy; tubo-ovarian pregnancy may occur.

Now remember that in interstitial pregnancy rupture is likely to be later than in the other forms of tubal pregnancy; it may take place at any time from one to four months. Rupture in the other portions of the tube usually occurs in six to eight weeks, although it may occur as early as the fourth week and as late as the twelfth week.

Now keep in mind that in the beginning the tube becomes hypertrophied and swollen, and the vascularity of the tube and broad ligament is greatly increased. If pregnancy is near the fimbriated ex-

tremity, extrusion through fimbria or tubal abortion will take place.

Remember that this may only be partial and that, while there will be shock, yet the hemorrhage will not be sufficient to cause collapse and death; but remember also that complete abortion may occur a little later with greater hemorrhage.

Remember that after tubal abortion the fetus usually dies, and if the mother survives, both fetus and membranes may be absorbed or become imbedded in the organized blood-clots, which usually after a few weeks become infected, and the patient develops symptoms of sepsis.

Remember that rupture of the tube may be partial or complete, and may be into the abdominal cavity or between the folds of the broad ligaments, and that the severity of the symptoms varies accordingly.

Remember that with a partial rupture the fetus and membranes act as a valve, the hemorrhage will be slow, finally clotting, so that there is a temporary control of bleeding points.

Keep in mind that the process may be renewed and more serious at any time; or it may be so severe from the beginning that the patient's abdomen will be filled with blood and she will perish from loss of blood.

Remember that if rupture takes place between the broad ligaments the hemorrhage fortunately will be controlled after a time.

Now remember that, as a rule, the product of conception perishes, but the placenta may retain a sufficient attachment, and with the membranes unruptured the fetus may develop to full term.

Remember that the fetus dies at full term if left alone.

Remember that such a child is usually imperfectly developed, both mentally and physically, and if removed by operation while still alive, will often die immediately or in a very few days.

Remember the interesting secondary changes that may take place in the fetus, after its late death. It may become calcified, forming a lithopedion; it may become mummified; or it may be found that nothing remains except the skeleton. In the first two instances the fetus may become encapsulated and remain for years without disturbing the patient greatly; in the last case it is frequently accompanied by suppuration and rupture (usually into rectum), and the skeleton is expelled piece by piece.

Symptoms Before Rupture.—Remember that the early symptoms of extrauterine pregnancy are those of normal pregnancy: viz., amenorrhea; morning nausea; changes in the breasts, etc.; and the patient believes herself normally pregnant.

Although many will complain of pains in the abdomen and in one of the inguinal regions, yet remember that some go on with no special discomfort until at the time of rupture.

Remember this: that when a patient employs you

for her physician early in pregnancy, or if she consults you for any irregularity in early pregnancy, a careful and thorough examination be made. Remember that the uterus will be enlarged and have the same characteristics as in normal pregnancy.

Don't lay too much stress on the blue discoloration of the vaginal mucous membrane; that may not be noticeable until the second or third month of gestation.

Remember that the cervix will be soft, the os patulous, the vagina will be moist, and the pulsating vessels may be felt.

Now carefully examine the tubal regions; the tube may be posterior to the uterus or clinging to the side of the uterus.

Remember that the mass is usually elongated and rather ovoidal in shape.

Remember that it is usually soft and boggy to the feel, and rather sensitive to the touch; the mass may give the sensation of contracting.

Remember that the greatest care must be exercised, lest the tube may be ruptured during examination.

Remember that often a history of long sterility is present, indicating abnormality in the Fallopian tubes.

Symptoms at Time of Rupture.—Now remember that, although tubal rupture may be preceded by a few days of abdominal discomfort and pain, it usually comes on suddenly and without warning.

Remember that it does not always follow great strain or exertion; it often comes with the slight effort of rising from bed or a chair.

Remember that the patient is seized by sudden, severe, abdominal and pelvic pains, which are usually followed by pallor and collapse.

Remember that the pain and shock may be so severe that the patient becomes unconscious; she will be deathly pale, with lips blue, pupils dilated, and a cold perspiration covering body; very restless (if not unconscious), with a shallow sighing respiration and a subnormal temperature. Nausea and vomiting are not uncommon.

Remember that, while conscious, the patient will be aware of the gravity of her symptoms and will express great fear, lest she will not recover.

Remember that the feeling of such a patient must be dreadful; seized suddenly in the midst of health, with agonizing pain; ears ringing and vision impaired, until objects become hazy and dance before her; nausea and vomiting that only tend to increase the gravity of the whole situation.

Remember that the decidua is usually thrown off and there is vaginal bleeding, which may be mistaken for miscarriage.

Remember that if the rupture has been intraperitoneal, bimanual examination will reveal the cul-de-sac distended into the vagina; further palpation will no doubt reveal the enlarged tube; the indications of free fluid will be found in the pelvis and abdom-

inal cavity. Now, if the patient survives, the blood coagulates, and the tumor is semisolid and often nodular; the pelvis is often walled off from the abdominal cavity by intestinal adhesions, or the same nodular masses may be felt up in the abdominal cavity as well.

Now remember, if the fetus does not perish, at time of rupture, gestation may continue until full term, when pains that more or less resemble labor pains occur, and the fetus dies.

Remember, if such a pregnancy is intraperitoneal, that the fetus occupies a higher position than usual; movements are more noticeable; the fetal heart sound is more easily heard and may be more easily palpated, because the thick uterine wall does not intervene; the uterus will only enlarge to about the size of a three or four months' pregnant uterus and may be pushed down or to one side.

If it is an intraligamentous pregnancy, it will be accompanied by discomfort and pain; the broad ligaments are raised; the uterus is raised and pushed to the opposite side; and the vagina on one side will be bulging.

Diagnosis.—Remember that the history of a probable or positive pregnancy must always be considered. Unfortunately, few women place themselves in the hands of a physician early enough before pregnancy to detect an abnormal condition of this kind before the time of rupture. Keep in mind, however, that it is the duty of the obstetrician to

make a careful examination of his case as soon as he is retained, to ascertain if the pregnancy is normal, or if conditions call for frequent examinations in the future.

Remember that, if in the first month or two of pregnancy the patient complains of pelvic distress or pain, and if upon examination a small mass may be felt in the region of either tube or perhaps posterior to uterus, it will need special watching. If it increases rapidly in size, it should call for prompt treatment. Don't be rough during these examinations. Handle the patient gently.

Diagnosis at Time of Rupture.—Remember that the history is of great importance; the patient has had sudden and severe pain followed by weakness and shock, which often seems as though it would prove fatal in a short time; there will be fluid blood-clots and pieces of membrane expelled from the uterus.

Remember that the hemorrhage is not fatal in all cases; the patient revives in a way, only to have a recurrence of the acute symptoms in a few days, with more hemorrhage, and membranes expelled from the uterus.

Don't fail to make a thorough bimanual examination before resorting to curettage for a supposed miscarriage. Remember that in this class of cases the pelvis and part of the abdomen will be filled with hard blood-clots and the patient will often present symptoms of peritonitis.

Treatment.—Remember that there is but one line of treatment and that is operative; the operation should be performed as early as the condition is recognized or strongly suspected. While waiting for the surgeon, don't use proctoclysis or any other form of normal saline therapeutics; it will tend to increase the hemorrhage. It is better to administer morphin to quiet the restless patient and relieve her pain than to resort to stimulation. Let her have plenty of fresh air; she will complain of being warm and have difficulty in breathing.

Remember that the ideal time to operate is before rupture, when the tube may be removed without damage to the other structures.

Arguments have been presented from time to time for and against operations during extreme shock from hemorrhage. Now, of course, if it were possible to state that in a certain number of hours or days the patient before us in a condition of collapse would cease bleeding and recover from her extreme condition, it would no doubt be safer and quite proper to wait; but remember that while waiting for the patient to grow stronger the golden moments may be lost and the patient gradually sinks and dies while we sit by, or we may wait too long, so that our patient is unable to stand the operation later, when we finally make up our minds that it is useless to wait longer.

To one who has had considerable experience with these cases there can be no doubt that an imme-

diate operation is indicated in all cases; in the class where the hemorrhage has not been severe, they can go through the operation safely, and doubtless are saved from a subsequent severe hemorrhage; in the class where the bleeding continues and fills the whole abdominal cavity, they will surely die unless the hemorrhage is stopped. We have never had occasion to regret operation in these cases at the earliest possible moment.

Remember that one of the great elements of success in operating on a grave case of hemorrhage is to do the work rapidly, using intravenous transfusion or hypodermoclysis during the operation, and proctoclysis and heat applied around patient after she is returned to bed.

CHAPTER VI.

MENSTRUATION AND ITS DISORDERS.

PUBERTY.

Remember that puberty is that time at which a young girl reaches womanhood.

Remember that puberty is reached earlier in warm than in cold climates. We found in our clinic that the average age at which a girl reaches puberty is thirteen.

Remember that the changes that take place are gradual and that even though a girl may be able to conceive at puberty she is not sufficiently developed to bear children before the age of 18 or 20. This age or period is known as the period of nubility.

Remember that as puberty approaches the general contour of the girl's body changes and enlarges and takes the form of woman.

Remember that habits also change with the development of the body from the girlish to the womanlike.

Keep in mind that this is a critical period in a girl's life. The mother or a close friend should fully acquaint the girl with the changes that are about to come, and with the full duties of womanhood.

Great care should be exercised during the first few periods. Keeping the feet as well as the body dry and warm may save her from a life of suffering.

MENSTRUATION.

Remember that menstruation is a physiological flow of a bloody discharge from the uterus, beginning with puberty and ceasing with the menopause, and occurs about every 28 days.

Remember that we have a physiological amenorrhea during pregnancy and during lactation. Remember also that there may be exceptions; some women have occasional bloody discharges during pregnancy; and some will menstruate during lactation.

Remember that they have premenstrual symptoms (more pronounced in some than others): slight swelling of the vulva; more or less engorgement of all the pelvic organs, which occasions a mucous discharge that often bathes the vulva; the breasts often become more or less tender and swollen; and there is a slight swelling of the thyroid gland.

Remember that this hyperemic condition of the genital organs is responsible for the feeling of fulness and slight distress. Soon the mucous flow is mixed with blood, and after the active period is on, there is usually a feeling of relief.

Remember that mucus, epithelial cells, and blood compose the flow and this continues actively for

three to four days; after which it begins to subside and again becomes mucus.

Remember that there is a considerable difference in the duration, time, and quantity of menstruation in different women. Remember that some women menstruate every three weeks, while some may go for a number of weeks. Remember that each woman must be governed by what seems to be normal in her individual case. Remember that what is physiological in one might be pathological in the other.

Remember that the average length of a woman's menstrual life is about 35 years.

OVULATION.

Remember that ovulation is the maturing and rupturing of a Graafian follicle and the throwing-off or escape of the ovum.

Remember that, according to recent investigations, there is no doubt that the impulse that controls the menstrual cycle is supplied by the ovaries.

Remember that the corpus luteum is directly concerned in the elaboration of the internal secretion that is thrown into the blood-stream.

Remember that, according to Leo Loeb (who speaks of this secretion as hormone), its function is twofold: one is to regulate the time between ovulations; and the other is to prepare the endometrium for the reception of the fecundated ovum and to form the maternal placenta.

MENOPAUSE.

Remember that the menopause (change of life, dodging point, climacteric) is that period in a woman's life when menstruation and child-bearing cease.

Remember that the menopause occurs, as a rule, from the ages of 42 to 48, although there is a wide variation from this general average. It has been known to occur as early as in the twenties, and to be delayed as late as the sixtieth or seventieth years.

Remember that pelvic diseases, with congestion and engorgement of pelvic organs, is often responsible for the indefinite delay of the menopause.

Remember that a woman with uterine prolapse (of the third degree), or with tubo-ovarian disease, will continue to menstruate indefinitely, unless the uterine or pelvic lesion is cured.

Now remember that menopause is the reverse of puberty, with a local and general atrophy and shrinking. The symmetrical outlines of the figure are lost, due to either atrophy or obesity. The breasts become shapeless and flattened; the vulva becomes wrinkled and flat; the vagina becomes pale and narrow; the uterus atrophies until it is a mere hard remnant, and sometimes disappears altogether; the hair over the genitals becomes thin and turns gray early.

Remember that, as a rule, the menses do not cease

suddenly and permanently (the ideal way), but very gradually, and after a very troublesome period of one, two, and sometimes three years.

Symptoms.—Remember that one of the most troublesome symptoms is the so-called "hot and cold flashes." Other circulatory disturbances are fulness of the head, dizziness, palpitation of the heart, etc.

Remember that the nervous manifestations are extremely numerous and varied: extreme nervousness, hysteria, melancholia, and insanity.

Remember that profuse hemorrhage at this time, or the return of menstruation after it has ceased for several months, or discharges streaked with blood, should call for a thorough examination; they may be due to tumors, inflammatory troubles, or cancer.

Remember that the menopause occurs at any time after removal of the ovaries, or uterus, or both, for diseased conditions.

Remember that there are exceptions and that sometimes the woman will continue to menstruate after removal of the ovaries, from an inflamed uterus; and we have seen hemorrhages occur at regular intervals where the ovaries had been removed, together with the supravaginal amputation of the uterus. These hemorrhages did not cease until after the large inflamed cervix had been removed.

Treatment.—Remember that the treatment should be directed toward the improvement of the general health of the patient as well as the cure of local

disorders. The nervous and mental troubles have to be relieved by improvement of surroundings, if they are not cheerful and pleasant; agreeable and pleasant occupation of time; careful attention to hygiene; cleanliness of the body; careful attention to diet, kidneys, and bowels; a moderate amount of exercise out of doors, when the weather permits.

Remember that local disorders must have attention.

PRECOCIOUS MENSTRUATION.

Remember that precocious menstruation means the flow of blood from the uterus in a girl before the age of puberty.

Now remember that it is not uncommon to find girls whose menstrual periods begin at eleven or twelve years of age; these girls are precocious in other respects; their form and general appearance assume that of a matured woman very early; they simply mature early, menstruate regularly, feel no special inconvenience or discomfort from it; maturing early, they often marry and become mothers early.

While it may occur, and cases are recorded of periodic bloody discharges in very young girls and in infants, don't be too sure that the presence of a little blood on the napkin or underwear is a precocious menstruation—it may come from the vulva or vagina. Remember that it may be due to irrita-

tion and adhesions of the clitoris, or about the vulva or hymen. It may be due to itching and rubbing of the parts, or to masturbation.

Treatment.—Remember that a thorough inspection of the parts is necessary; look for causes of irritation and inflammation, and remove them. The proper treatment at this time may save this child from sexual excesses and perversions.

Remember, if this child is old enough and has acquired precocious habits, that she will require the greatest care and teachings along the lines of morality; keeping good hours, abstaining from bad companions (boys and girls), bad books, etc., will do much for these girls.

DELAYED MENSTRUATION.

Remember that, if menstruation is delayed as late as the fifteenth year of life, it is known as delayed, or retarded, menstruation.

Remember that menstruation may be delayed this long in some girls, when it will begin and occur at regular intervals; sometimes in these delayed cases the pelvic organs are poorly developed, and menstruation that starts later than usual occurs at irregular and prolonged intervals afterward.

Remember that, should menstruation be delayed and the menstrual molimen occur with a feeling of fulness and distress in the vagina or uterus, or both, with perhaps a distention of the bladder, the case

should be thoroughly investigated for congenital malformation or occlusion of some part of the genital tract.

Remember that menstruation may be delayed by some debilitating disease.

Treatment.—Treat the cause. If the genital apparatus is normal and the girl is not ill as a result of the delayed menses, do not give emmenagogues; let her alone, and the menses will appear in due time.

Remember, if she is suffering from some general disease, to treat that condition; do not undertake to influence or produce a menstrual flow directly.

If the canal is not patulous, it should be treated as the condition requires.

AMENORRHEA.

Amenorrhea is an absence of menstruation. Remember that we may have a physiologic and a pathologic amenorrhea.

Remember that physiologic amenorrhea occurs in the human female before puberty, during pregnancy and lactation, and after the menopause. Remember, also, that occasionally there will be found women who have a slight flow during pregnancy and during the latter months of lactation.

Remember that in imperforate hymen or imperforated cervix the menstrual molimen occurs, but there is no visible flow. The menstrual fluids remain in the uterus (hematometra), back up in the tubes

(hematosalpinx), or fill the vagina (hematocolpus).

Now remember that as a general rule when there is an absence of the vagina there is a lack of development, or absence of the uterus and ovaries, and vice versa.

Remember that atresia of the genital tract, resulting in amenorrhea, may occur from traumatism of the genital tract, e. g., injuries during labor, or operations on the cervix, where no allowance is made for a cervical tract or canal; or from operations, such as removing the ovaries, or the uterus.

Remember that women suffering from febrile diseases or the chronic debilitating diseases may have amenorrhea.

Remember that women suffering from nervous and mental diseases are very liable to amenorrhea.

Symptoms.—Remember that, in the cases of congenital obstruction of some portion of the canal, there will be much pain at each menstrual period, owing to the distention of the vagina or uterus, or both, by the accumulation of menstrual fluid, causing distention of the parts. After a few menstruations the abdomen may be noticeably larger, and some of the fluid may escape into the peritoneal cavity through the Fallopian tubes, causing severe pain in the abdomen.

Now remember that, where there are no troublesome symptoms that accompany amenorrhea and where an examination reveals (in a matured girl)

rudimentary organs, or an absence of a part or all of the genital organs, the prognosis for improvement of her condition is very bad.

Much care must be exercised regarding advice about matrimony. It is much better not to marry at all than to marry and make a complete failure.

Treatment.—Remember that, in the cases due to acute or chronic systemic diseases or to nervous or mental disorders, these conditions must be treated, and the amenorrhea will take care of itself. If there is some acquired stenosis or atresia of any part of the genital canal, it must be treated entirely on the merits of the individual case.

Remember that the treatment must necessarily depend upon the cause. Rest, with proper hygienic surroundings, fresh air, judicious exercise, good nourishing food, etc., constitute about the routine general treatment.

Remember that, in young girls who are crowded with work in school and at the same time "doing society," a very important part of the treatment is to relieve this poor girl of some of the nervous strain; first of the social strain; and if her condition does not promptly improve, she should be taken out of school. This girl requires rest, and in addition a good iron tonic, cathartics, etc., as indicated.

Of the various drugs used in amenorrhea, may be named iron, strychnin, ergot, manganese, aloes, apiol, oxalic acid, etc. But use direct emmenagogues with caution, and if the cause can be found

and treated, these emmenagogues in all probability will not be needed.

MENORRHAGIA AND METRORRHAGIA.

Remember that, although, theoretically, menorrhagia means an excessive flow at the menstrual period and metrorrhagia means a flow or hemorrhage that does not correspond to the menstrual period, yet a metrorrhagia, or excessive menstrual flow, is practically always prolonged, and sometimes rather irregular by ceasing slightly or almost completely for a few hours or a day, to begin freshly again with a little exertion; hence, practically speaking, it is often difficult to differentiate one from the other, and for practical purposes the term menorrhagia will answer very well in both cases.

Remember that any pathologic condition that produces congestion of the pelvic organs will cause menorrhagia, viz., chronic pelvic inflammation, malignant disease of the uterus, displacement (especially prolapse), inversion, tumors of either uterus or ovaries.

Remember that menorrhagia may also occur in hemophiliacs, in scurvy, purpura, or syphilis. It may occur with splenic hypertrophy, diseases of the liver or kidneys, and sometimes in cases of mitral insufficiency.

Remember that pieces of retained membrane or clots after parturition or abortion may be the cause. We found a woman in our clinic who had worn a

wire spring in the uterus for over two years to prevent pregnancy and to bring on the flow. Her flow had been excessive and almost constant. When we saw her, the uterus and appendages were destroyed by abscess formation, necessitating a complete hysterectomy.

Treatment.—Remember that there is always a cause, which must be sought and treated; whether general or local, if corrected, the menorrhagia will in all probability take care of itself.

Remember, however, that for temporary relief from excessive flowing rest (absolute rest) in bed is necessary; if the flow continues, the foot of the bed may be elevated ten to twelve inches; this in itself will check any ordinary hemorrhage. The bowels should be moved daily with salines; the diet should be liquid (soft diet). If there is evidence of pelvic inflammation, frequent hot-water douches should be given. At sleeping time a tampon of glycerin and ichthyol, 10 per cent, may be inserted. This can be removed by the patient herself or the nurse the following morning; after which give a hot douche.

Remember that if there is evidence of retained membrane or clots a thorough dilatation and curettage must be done, using a general anesthetic. Remember that drugs alone are not to be depended upon; they will probably fail. Among valuable drugs that may be used in connection with general treatment are mineral acids, viburnum prunifolium, hydrastis, ergot, hamamelis, etc.

DYSMENORRHEA.

Remember that dysmenorrhea is only a symptom of some lesion of the pelvic organs, manifested by *painful menstruation.*

Remember that the slight discomforts felt by the majority of women during their menstrual periods should not be spoken of as dysmenorrhea.

Causes.—Remember that dysmenorrhea is found in young girls, with anteflexion of the uterus or an extremely small canal.

Remember that pelvic inflammation with the additional congestion incident to menstruation will cause dysmenorrhea.

Remember that retroflexion may (though not always) cause dysmenorrhea.

Remember that neuralgia, rheumatism, and gout may cause dysmenorrhea of a very troublesome type.

Symptoms.—Remember that if the dysmenorrhea is due to sharp flexions or obstructions the pain is usually excruciating at first, until there is some relaxation and dilatation of the canal, when the pain will gradually diminish.

Now in pelvic inflammation there is usually felt a constant pain or ache, and with the approach of menstruation this is naturally increased. After the flow is well begun (and it is usually quite profuse), there will follow a feeling of relief, the flow relieving the engorgement and congestion.

Remember that in the cases due to systemic troubles these must be treated as indicated.

Treatment.—Ascertain the cause and treat accordingly.

Remember that it is a very common habit of many women with painful menstruation to numb their sensibilities as much as possible with drugs and whiskey; and frequently they acquire the morphin or whiskey habit in this way. There are very few cases of dysmenorrhea that cannot be relieved if the cause is found and properly treated.

Remember, if the uterus is anteflexed or the canal is small, that a thorough dilatation under an anesthetic will relieve this. It may return in a few months, when it should be repeated. If both dilatations are well done, the trouble in all probability will not return.

Remember, if there are uterine displacement, pelvic tumors, etc., they must be handled as indicated.

Remember that it is very important that a girl should be educated in the proper manner of dress, and her clothing should always be sufficient to keep her dry and warm; disregard of this rule may be the means of starting the young girl on a life of suffering.

Remember that constipation adds to pelvic congestion. Women should be taught the great necessity of regularity in their daily stools.

Remember that local treatment of daily hot douches and tampons of some glycerin mixture two

or three times a week helps materially if there is uterine or pelvic inflammation.

Don't undertake intrauterine applications for the relief of this trouble; it is doubtful if any good can be accomplished, and harm might be done. A favorite plan of ours has been to institute treatment with hot douches and tampons, and then at the approach of the menstrual period the patient is put in bed, if possible; the diet should be soft and easily digested. The following is a very favorite prescription and is given three or four times daily for two or three days prior to the appearance of the flow. At the advent of the flow, if the pain is great, it may be given every hour or two, until the patient feels relieved, when the doses may be made much farther apart:

Tincturæ cannabis indicæ.....	ʒ ij
Fluidextracti salicis nigræ.....	ʒ ij
Fluidextracti ergotæ	ʒ iv
Elixiris aromatici q. s. ad.....	℥ iv

Misce.

Sig.: Teaspoonful in one-third cupful of hot water every one to five or six hours until relieved.

If the case is severe, three to six grains of codein may be added. Among other drugs are aspirin, sodium salicylate, phenacetin, apiol, camphor, pulsatilla, sodium and potassium bromid, viburnum prunifolium, etc.

A case of dysmenorrhea of the neuralgic type will test one's skill to the utmost and call upon all of one's therapeutic acumen. We have relieved this hys-

terical spasm with gr. $\frac{1}{20}$ to gr. $\frac{1}{10}$ of apomorphin; this relaxes quickly, and does no harm.

The unsexing of a woman must be advised with the greatest caution, and not until other means have been exhausted, and after advice with able counsel.

CHAPTER VII.

DISEASES OF THE URETHRA.

URETHRITIS.

Remember that this is not so common as it is in men; gonorrhea is the most frequent cause.

Remember that trauma during childbirth or passage of a calculus and rough instrumentation may cause urethritis.

Remember that in the gonorrheal form the symptoms are more severe and consist in burning during urination; frequent and urgent desire to urinate; and the presence of manifestations of gonorrhea in other portions of the genital tract.

Remember that inspection shows pus in mouth of urethra, or it is very easily pressed out. The urethra is tender upon pressure.

Treatment.—Remember that rest is an important factor in treatment.

Diet should be restricted to articles of food that will render the urine bland. Avoid meats, fried and greasy foods, coffee or tea, spices, vinegar, etc.

Salines should be used to flush out the bowels. Should the urine be strongly acid, give alkaline mineral waters, and in addition administer the acetate

or citrate of potash; if it is alkaline, give ammonium benzoate, boric acid, salol, combined with the infusion of buchu.

The oil of sandalwood should be given as a routine, because of its beneficial effect upon the urethral mucosa.

In gonorrheal urethritis local treatment is imperative, and the following technic should be followed:

1. With the patient in the dorsal position douche the vagina with 3 per cent lysol solution. Another good method for cleansing the vagina is the following: Introduce bivalve speculum, make round, soft balls with absorbent cotton, and use a long dissecting forceps. Dip the balls of cotton in hot lysol solution, and by means of the dissecting forceps introduce it into the vagina through the speculum, and mop thoroughly back behind the cervix. Remove, dry with dry cotton, and again introduce ball after dipping in solution. This is continued until the vaginal mucosa has been perfectly cleansed.

2. Cocain solution, 4 per cent, is applied to the urethra on an applicator wrapped with cotton, and allowed to remain five minutes.

3. A reflex catheter is introduced, and the urethra thoroughly washed out with hot normal salt solution.

4. A bivalve urethral speculum is introduced as far as the internal meatus, and an applicator wrapped with cotton and saturated with a 25 per

cent argyrol solution, or a 1 per cent solution of protargol, is passed into the canal. The speculum is removed, and the applicator slowly withdrawn. This treatment should be given daily until cured.

When the discharge changes from purulent to that of egg-albumin in color, it is better to discontinue the silver solution and use one of the following astringents: zinc sulphate gr. j or ij to the ounce; zinc acetate gr. x to the ounce; lead acetate gr. ij to the ounce.

In chronic gonorrheal conditions of the urethra the canal is cocainized, and the entire canal painted with a solution of silver nitrate, gr. v to the ounce. This is followed by the application of weaker solutions twice a week, until discharge stops.

Ulcers occurring along the urethra receive the following treatment:

Cocainize the urethra; introduce the urethroscope to the internal meatus; wind cotton on an applicator and dip into a solution of silver nitrate, one dram to the ounce, and touch each ulcer with the solution. This is repeated once a week until cured.

Where Skene's glands are chronically involved, the meatus is dilated, and probe inserted; each duct is slit open on the urethral surface. The raw surface is cauterized with 95 per cent phenol.

STRICTURE.

Remember that stricture of the urethra in the female is not nearly so common as in the male. It

may follow acute gonorrheal inflammation, or chancre, or chancroid, or tumors of the tract, or trauma resulting from childbirth.

Remember always that the incontinence or retention that is observed in the male may also be found in the female.

Remember that the most common symptom is difficult and frequent urination.

The induration at the site of the stricture may be palpated.

Treatment.—The treatment is dilatation, either forcible or gradual.

Forcible dilatation is indicated in the majority of cases. It should not be used where the cicatricial tissue is so dense that too much trauma will result from force necessary to dilate.

Remember that forcible dilatation must be done carefully and not too rapidly, so as to avoid tearing the urethra.

Remember that a general anesthetic should be given and the dilatation done at one sitting. The patient is placed in the dorsal position, and a small Hegar's uterine dilator is passed. The size should be increased until the urethra is fully dilated.

After the operation pass a dilator every third or fourth day for two or three weeks.

Gradual dilatation is done under a local anesthesia, and beginning with a small-sized dilator, the size is increased every third day until full dilatation is accomplished.

Remember that when the fibrous tissue is dense and unyielding it should be cut with a urethrotome by the same method as in the male, but do not fail to follow operation with occasional dilatations.

VESICOURETHRAL FISSURE.

Remember that the location of the fissure will determine many of the symptoms: thus, if the fissure is wholly within the urethra, then a burning sensation on voiding urine would be the symptom; but if the fissure extends back into the base of the bladder, then the constant irritation of the urine, hence a constant burning and desire to frequently urinate, together with severe pain produced by the muscular contraction at the close of urination.

Remember that a tender spot is found by pressing over the neck of the bladder through the vagina.

The fissure is easily seen through the urethroscope.

Treatment.—Remember that divulsion of the vesicourethral juncture should first be tried, as a majority of cases are cured by this treatment.

The urine is rendered bland by proper medication, and the bowels thoroughly opened before the operation.

A general anesthetic is used, and the dilatation done by means of a pair of Hegar's uterine dilators, beginning with small and increasing in size until the urethra is dilated at least one-half inch. Keep patient in bed one week, but the operation is not repeated.

PROLAPSE.

Remember that slight eversion or pouting of the urethral mucosa is found in women who have borne children, and has no pathologic significance.

Remember that the size and extent vary from only one part of the urethra to others where the entire circumference of the canal is involved.

Remember that inspection reveals a dark, congested mass protruding from the external meatus, in the center of which can be seen the urethral opening. When the eversion is limited to a part of the circumference of the urethra, there will be a small tumor apparently attached to the margin of the urethral opening and resembling a caruncle in appearance.

Treatment.—Remember that the first indication in treatment is to discover the cause, if possible, and remove it.

When the condition is recent and the mucosa hypertrophied, overstretched, or relaxed, good results may follow a non-operative treatment; but when atrophy results from chronic changes, or the urethra is torn from its normal attachments, there is nothing but an operation that will accomplish any good.

Rest in bed is necessary in non-surgical treatment. In anemic women a good iron tonic is indicated.

If the prolapse is dependent upon irritation in the

rectum or bladder, it is often restored when the tenesmus is relieved.

The bowels should be kept loose by the use of saline and potassium acetate and hexamethylenamin, administered to render the urine bland or innocuous.

After the swelling and edema subside, an attempt should be made to reduce the prolapse, and if successful, astringent injections should be used.

A pint of solution of alum (ʒ iiss), or tannic acid (ʒ i to iij), should be injected daily through the return-flow catheter.

Once every ten days the urethral mucosa should be painted with a solution of silver nitrate (gr. ij to ʒ j).

This line of treatment should not be continued longer than three months, when surgical interference should be resorted to if no beneficial results have been attained.

The best surgical procedure is obtained by removal of the prolapsed mucosa.

The patient should be given a general anesthetic. The prolapsed mucosa is seized with tissue forceps and made taut by traction. A chromic catgut ligature is carried through the upper edge of the external meatus, directly across the canal, and out through the lower margin of the urethral orifice. The prolapsed mucous membrane is cut away in front of the ligature with a pair of curved scissors, and the transfixion suture is caught with a pair of dissecting forceps and pulled part of the way out

of the urethral canal. The loop thus formed is cut, thus leaving two sutures, which are tied. This controls the edge of the wound at opposite points, and thus prevents retraction of the mucosa.

Next, a series of interrupted catgut sutures are introduced about a quarter of an inch apart completely around the external meatus. The continuous suture should not be used, because of the tendency to pucker the meatus and eventually cause a stricture.

The wound should be douched daily with some hot antiseptic solution, as a 2 per cent lysol, and a pad and T-bandage are applied.

The pad should be removed for urination or defecation, and the wound should be washed. Keep the patient in bed a week or ten days.

URETHROCELE.

Remember that this is a sacculation of the middle third of the posterior wall of the urethra, most often produced by traumatism during labor.

Remember that partial incontinence of urine in a woman who has borne children should arouse suspicion.

Remember that a very frequent complication of urethrocele is a urethritis, and this causes frequent and painful micturition.

Remember that inspection reveals a bulging on the anterior vaginal wall, which is easily compressible. The introduction of a sound into the urethra

with the point downward toward posterior wall of the canal will slip into the sac and can be felt by the examining finger in the vagina.

Remember a thick boggy tumor that is tender on pressure is likely to be a suburethral abscess and not an urethrocele.

Treatment.—When due to obstruction at the external meatus, either from stricture or tumor, the condition should be treated on the non-operative plan. The first step is the cure of stricture or removal of the tumor.

2. Cure the coexisting urethritis.

3. Use astringent injections recommended in the medicinal treatment of urethral prolapse.

4. Skene's pessary should be worn from the beginning of treatment until cured.

Remember that the operative procedure varies, depending upon the presence of urethritis.

When urethritis complicates urethrocele, the first step is to make a urethrovaginal fistula in the most dependent part of the urethrocele. This drains the tumor and prevents the accumulation and decomposition of urine in the sac.

2. Treat the urethritis medicinally until cured.

3. Close the fistula, cutting away the redundant tissue composing the urethrocele.

4. Introduce a Skene's pessary, and have patient wear it for five or six months to prevent a return of the condition.

Remember that in cases not complicated by ure-

thritis an opening is made between urethra and vagina at the bottom of the urethrocele and the excess tissue cut away at once. The wound is sutured, and when the patient leaves her bed, a Skene's pessary should be worn for several months.

CARUNCLE.

Remember that these tumors usually occur late in the child-bearing period. They are, as a rule, found at the margin of the external meatus, but may be located in other parts of the urethral canal.

Remember that these are the most frequent tumors of the urethra, and while they are usually single, they may be multiple.

Remember that a small, red, raspberry-like growth attached to the margin of the external meatus that is painful on touch or urination is nearly always a caruncle.

Treatment.—Remember that a general anesthesia is indicated. The tumor is seized with a pair of forceps, and the pedicle cut close to the urethra with a pair of scissors. These growths are liable to return; therefore it is a good plan to cauterize the base with an electric cautery and allow it to heal by granulation.

CHAPTER VIII.

DISEASES OF THE BLADDER.

CYSTITIS.

Remember that the severity of the symptoms depends upon the degree of inflammatory changes occurring. Thus, in a mild type the symptom-group is: frequent micturition, vesical tenesmus, pain, and urinary changes.

There is usually a feeling of tenderness over the base of the bladder, made more acute by standing.

Remember that in the severe type, in addition to the above, there will be hematuria. The urine is turbid, or opaque, and contains pus, mucus, and epithelial cells, also many bacteria. The reaction may be alkaline, when there will be present triple phosphates, ammonium urate, and amorphous phosphate.

Remember that in the virulent type there will be the foregoing group of symptoms, and in addition, the following general symptoms: rigors, fever, rapid pulse, and in some neurasthenia; sometimes we have the manifestations of a profound septic infection.

Treatment.—Remember that rest in bed is very

important, and the more severe the attack the more urgent is absolute rest.

The diet must be concentrated, nutritious, and bland.

The bowels must be kept open, and daily administration of Rochelle salts or magnesium citrate is excellent.

The urine should be rendered bland. The regulation of the diet and drink is often sufficient to accomplish this. When the urine is strongly acid, then alkaline mineral waters should be drunk, and in addition, potassium acetate or citrate combined with the infusion of buchu should be exhibited. The elixir buchu et potassii acetatis (N. F.), given in tablespoonful doses, is an excellent diuretic and urinary sedative.

If the urine is alkaline, then ammonium benzoate, salol, or benzoic acid should be given.

Hexamethylenamin in five-grain doses night and morning should be given to check bacterial growth and extension along the ureters to the bladder. After the acute symptoms subside oil of sandalwood should be given for its beneficial effect on the mucosa.

Locally, the bladder should be irrigated with some antiseptic solution, and a solution of permanganate of potash, 1 to 4 per cent, is the best. A saturated solution of boracic acid or 1 to 2 per cent solution of silver nitrate, or ½ to 1 per cent solution of lysol, may also be tried.

VESICAL CALCULUS.

Remember that vesical calculi are not so common in women as men, owing to the shortness and dilatability of the urethral canal.

They are always primary, because a small stone coming from the kidney is at once passed, and thus does not remain to form a nucleus for future deposit of urinary salts.

Remember that improper repair of vesical fistulæ and cystoceles is the most common cause of vesical calculi.

In repairing a vesical fistula, if the sutures are passed through the mucous membrane, the suture material thus forms a nucleus upon which the urinary salts are deposited.

Remember that the symptoms are not characteristic of stone. They are the signs of cystitis rather, caused by trauma.

There will be frequent and painful micturition, tenesmus, and in severe cases, hematuria.

Remember that the sudden stoppage of the stream occurs only when the stone is small and temporarily obstructs the vesicourethral opening.

Remember that the habit of constantly scratching the parts by a young girl should arouse suspicion of a stone or other foreign body, as they almost always feel in the vulva the pain and soreness produced by a vesical stone.

Remember that the sound should be used to ex-

plore the bladder, and when it comes into contact with the calculus, a peculiar click is heard, and a grating sensation is imparted to the fingers as the tip of the instrument scrapes over it.

Remember that it is not always possible to recognize a stone with a sound, because it may have become encysted or may be covered by a clot of blood, or again it may have become attached to the anterior wall of the bladder, thus eluding the instrument.

Remember that cystoscopic examination should be made not only to confirm the diagnosis but also to determine the condition of the mucosa of the bladder, because cystitis is a constant symptom when there is a foreign body in the bladder, and since the cystoscope is such a substantial help from the standpoint of both diagnosis and treatment, it should be used in practically all bladder affections.

Treatment.—Remember that, owing to the shortness and dilatability of the female urethra, small stones may be removed safely through it, by either forceps or manipulation.

The patient should be placed in the dorsal position, and the bladder thoroughly washed out with a hot boracic acid solution. The next step is to dilate the urethra and inject three ounces of warm normal salt solution into the bladder. Locate the stone either by bimanual palpation or by the cystoscope. The forceps are then introduced into the bladder, and guided by the finger in the vagina, the stone is grasped by the forceps and slowly withdrawn.

In some cases, by the vaginal fingers and counter-pressure over the symphysis, the stone may be worked along into the urethral opening, whence it may be pushed along by the vaginal fingers through the external meatus.

Remember that litholapaxy should be attempted on moderate-sized stones that are soft and easily crushed. After thoroughly crushing the stone, the bladder should be thoroughly irrigated through a glass catheter.

Remember that suprapubic cystotomy is the operation indicated in girls not having reached the age of puberty, and in women when the stone is very large.

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